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ANNUAL REPORT
OF THE
GOVERNOR GENERAL
OF THE PHILIPPINE ISLANDS
1928

MESSAGE FROM THE PRESIDENT OF THE UNITED STATES TRANSMITTING THE REPORT OF THE GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS, INCLUDING REPORTS OF THE HEADS OF THE DEPARTMENTS OF THE PHILIPPINE GOVERNMENT, FOR THE FISCAL YEAR ENDED DECEMBER 31, 1928



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MESSAGE

To the Congress of the United States:

As required by section 21 of the act of Congress approved August 29, 1916, entitled "An act to declare the purpose of the people of the United States as to the future political status of the people of the Philippine Islands, and to provide a more autonomous government for those islands," I transmit herewith, for the information of the Congress, the report of the Governor General of the Philippine Islands covering the year ended December 31, 1928, and the additional two months up to the close of the administration of Gov. Henry L. Stimson at the end of February, 1929, together with the reports of the heads of the several departments of the Philippine government for the year ended December 31, 1928.

I concur in the recommendation of the Secretary of War that this report be printed as a congressional document.

HERBERT HOOVER.

THE WHITE HOUSE, *December 5, 1929.*



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ANNUAL REPORT OF THE GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS

OFFICE OF THE GOVERNOR GENERAL,
Manila, P. I., March 1, 1929.

The SECRETARY OF WAR, *Washington, D. C.*

SIR: I have the honor to submit the following report on the government of the Philippine Islands for the year ending December 31, 1928, and the additional two months up to the close of my administration at the end of February, 1929.

Inasmuch as the period covered by this report substantially corresponds to the time covered by my own term in the islands, it would seem appropriate to present a general summary, or outline, of the problems, efforts, and accomplishments of that period before taking up the details of the annual report. This is the more true in that circumstances made it possible for me to introduce certain new steps in governmental procedure and to attempt to push forward certain policies of insular government which, if not new, had not previously had much opportunity for progress.

I. THE PROBLEM PRESENTED BY THE POLITICAL SITUATION IN THE PHILIPPINES UPON MY APPOINTMENT

In July, 1923, differences between my predecessor and the political leaders of the islands produced an attempt by the latter to deadlock the government of the islands, the entire cabinet and the two legislative members of the then council of state resigning in concert and the legislature sending a commission to Washington to request the recall of the executive. For nearly five years thereafter the government had proceeded without any regular members of the cabinet except the vice governor and the secretary of the interior, whose appointment had been confirmed toward the end of that period. All the other departments of government were carried on by undersecretaries acting as heads. While the executive branch of the government under these conditions proceeded with its ordinary functions, co-operative relations between the executive and the legislature were very much restricted.

At the same time, the conditions of Philippine government established under the organic act of 1916 were such as to require for success an unusually great amount of cooperation between the executive and the legislature and especial efforts to obtain such cooperation. Under that act the supreme executive power is vested in a Governor General chosen by an American President and Senate 10,000 miles away from the islands, while general legislative power is vested in a legislature elected by a Filipino constituency under almost general

manhood suffrage. The inevitable differences of viewpoint, the superabundant opportunities for mutual misunderstanding, and mutual provocation thus occasioned very evidently make it necessary not only that there should be especial efforts continually put forth for the display of personal consideration and personal tact on both sides, but also that there should exist definitely organized governmental machinery which should encourage such tact and consideration by making the intercourse between the executive and the legislature natural and easy.

It has been frequently asserted that opposition to American administration in the Philippines is an almost wholly artificial result of selfish agitation by comparatively few native leaders. The result of my year's experience has been to make me feel that such assertions are much exaggerated and to recognize that there is a racial sensitiveness between the brown and the white races in the islands which is inevitable and enters into almost every problem of administration, and which can be handled only by the exercise of the utmost consideration on the part of those Americans who are vested with executive responsibility. In the absence of such consideration, this racial sensitiveness of the Malay may easily be provoked into fanatical outbursts. On the other hand, when compared with many other eastern peoples, even of the same Malay race, the Filipino is gifted with such natural kindness and hospitality of character and has already made such progress in civilization during the 300 years of Spanish and American sovereignty that when given the necessary tact on the part of his white colleagues he is one of the easiest men in the world to work with.

Before my acceptance of the appointment as Governor General, I was visited in America by Filipino legislative leaders who promised me that if I would come to the islands I should receive their cooperation. When I suggested that such cooperation must involve no surrender of American principle, they cordially accepted that limitation. Now at the end of the year I can truthfully say that this promise has been loyally fulfilled. Not only has there been no attempt made to take advantage of my own inexperience, but I have been more than once saved by their efforts from the consequences of my own mistakes in tactfulness among their followers. I have conferred with them alone in the same manner and upon the same terms as I would confer with political leaders of my own country. There has been no attempt to take advantage of such relationships, and their word when given has been faithfully observed. In view of certain current assertions as to their attitude toward past administrations, they are entitled to the full credit of this acknowledgment from mine.

In view of misunderstandings of past years, I think it worth while to record certain features in detail for the benefit of American administrators who, like myself, may be without previous experience in the Orient. When I assumed office I was warned that the nature of the oriental was such that it would be dangerous for me to confer with them without the presence of American witnesses. I rejected this advice, feeling that it was better to trust and be betrayed than to make mutual confidence impossible. So far as I am aware, I was not betrayed in a single instance; and the character of our confer-

ences became such that I was frequently made the recipient of confidences by the Filipino leaders which proved of priceless value to my administration. Again, bearing in mind the responsibilities of leadership in political organizations in the United States, I was very careful never to surprise the Filipino leaders of the party organizations with which I was dealing by an Executive decision of any importance. Instead I always conferred with them about it beforehand, giving them an opportunity to discuss it and, if finally decided on, to prepare their followers for its announcement. Furthermore, if possible the announcement of such a decision was always made as one in which they had participated or had suggested. In that way many an important executive policy, which inevitably would have been resented by Filipino public opinion had it been deemed to be the sole act of an alien executive, was accepted or welcomed as coming also from their own leaders. These precautions may seem trivial and self-evident, but in such a situation as exists in the Philippines I am satisfied that they are vital and, unless they are constantly borne in mind, misunderstandings and suspicions are inevitable.

II. THE PROBLEM PRESENTED BY LACK OF ECONOMIC DEVELOPMENT IN THE PHILIPPINES AND THE CONSEQUENT LACK OF REVENUES

This difficulty is fundamental and has frequently been commented upon. At the same time it is susceptible only to slow amelioration and cure. The Philippines are an archipelago with great possibilities for the development of a great variety of tropical agricultural products, but no very significant mineral wealth has thus far been discovered or developed. Their coal deposits are neither great nor rich, and no commercial oil beds are known. At present their population is almost wholly devoted to a few basic forms of agriculture—rice, sugar, coconuts, and hemp being the principal crops. Their commerce is in the hands of comparatively few firms, chiefly American and foreign, dealing in these commodities. Their manufactures are almost negligible.

Economic development in the islands, even along these scanty lines, has been slow, due partly to racial and tropical inertia and partly to the hesitancy of foreign capital to enter the islands while their future political status is deemed to be uncertain. As a result their governmental revenues have increased very slowly and for the five years prior to my arrival in the islands had been almost stationary in spite of the fact that taxation had reached a level which in general was quite as high as the islands should bear.

At the same time, under the American leadership of the past 30 years the individual Filipino had developed an appetite for the material advantages of life which was quite out of proportion to the power of his governmental revenues to satisfy. The standard of living for the individual laborer in the Philippines is, I believe, far beyond that of a similar laborer in any neighboring oriental country; and his thirst for education, his enjoyment and use of the new improved roads and other facilities throughout the islands, and his demand for further public improvements is so general and pronounced as to be the most striking feature of present Filipino civilization.

Economic development is further controlled by historic Filipino policy toward their public land. Their experience during the Spanish régime with large accumulations of land and other property in the hands of the friars, and the consequent tyranny from which they suffered, not only resulted in the passage of laws, under the American régime, strictly limiting the size of such landholdings in the future, but has also resulted in a general public sentiment against such large landholdings which is one of the strongest political sentiments which the average Filipino holds to-day. It is so strong as to be controlling upon their future legislation and can not be disregarded in any plan for the future development of the islands. The average Filipino believes that it is better for his country to be slowly and gradually developed by a population of comparatively small individual landowners than to be more rapidly exploited by a few large corporations which own the land and till it either with tenant farmers or hired employees. The existence of this native sentiment has not been generally recognized in the United States, but the events of my own year's experience brought it to my attention as one of the deepest and most controlling currents of public opinion in the islands and one which it would be folly to disregard or attempt to defy. In other words, I believe it is clear that agricultural development in the Philippines of a character which requires the coordinated production of large tracts of land must be reached by the cooperative efforts of a large number of hacenderos or landowners grouped about a common central which guides, fosters, and finances them under contract rather than by large holdings in fee by single corporations.

The existence of this strong feeling against land monopolization added to the ever-present racial sensitiveness toward foreign exploitation, whether American or Mongolian, tends to make the problem of stimulating the introduction of the much needed capital for economic development from America a very delicate one; and this problem was further complicated by the fact that the corporation laws of the islands, both those included in their general statutes and some provisions of the organic act of 1916, were so restricted and obsolete in the light of modern American corporate finance as to quite prohibit any satisfactory flow of American capital into the islands. Thus the problem of stimulating the slow economic development in the islands was surrounded with many difficulties. It requires not only tact and energy to brush away these clearly erroneous legal restrictions, but it also requires sympathy with the Filipino viewpoint on the part of the American capital as well as on the part of the American public officials who must act as the guides and protectors both of the Filipino public and the foreign investors.

On the other hand, however, the existence of this strong national feeling against land exploitation by large corporations and in favor of development only by comparatively small landholders shows how needless is the fear held by many American producers of sugar, lest the Philippine Islands develop into a strong and immediate competitor of American sugar. The acreage of land under sugar in the Philippines has increased very little during the past 50 years. The increase in production of sugar during the American occupation is due almost entirely to the fact that from 1896 to 1903 large portions

of the sugar fields were devastated by war and banditry, and secondly, to the fact that under American sovereignty large modern central mills recovering over 90 per cent of the sugar content of the cane have replaced the former carabao mills of the Spanish period, which rarely recovered more than 50 per cent. The effect of these changes is now practically complete. Further increase in production must depend very largely upon increasing the acreage, and under the land policy of the Filipinos above described this can only take place very slowly.

III. THE IMMEDIATE POLITICAL SITUATION ON MY ARRIVAL IN MARCH, 1928

When I arrived in Manila on March 1, 1928, the campaign for the general election of the members of the Philippine Legislature, which takes place every three years, was approaching. The election was held on June 5, and the campaign for nominations and subsequent election was already in progress. It was a fortunate time for a new administration to begin because it offered a definite point of separation and departure from the issues of the past administration and the opportunity to start afresh upon the basis of a new election. It also gave me an opportunity to observe at first hand the issues and conduct of the campaign and election.

So far as the presentation of any clear-cut normal insular issues between the two principal parties was concerned, the situation was disappointing. I could discover no such issue, and the leaders of the two parties could point out none when I interrogated them. There seemed to be no question discussed in the campaign or platforms which could be regarded as a mandate for future insular legislation after the election. On the contrary, nearly all candidates were absorbed entirely in local or personal questions.

One question, however, was involved in the election which, while it could not be called a party or political issue, being, on the contrary, of a nature which might be termed revolutionary in character, was nevertheless of extreme importance to the future of my administration. In the Province of Nueva Ecija, Mr. Isauro Gabaldon, who had just resigned his position as Resident Commissioner in Washington, ran on the platform which demanded that there should be no cooperation with my administration. He attacked the leaders who had promised to cooperate with me and demanded that the revolutionary policies of noncooperation and deadlock of government which had been attempted against General Wood should be continued against me. This same issue, in a less formal and determined way, was presented by certain other candidates here and there in the islands, notably in Cebu. The result of this issue was fortunate for future cooperation. All of the candidates who raised it were defeated, including Mr. Gabaldon, who by position, antecedents, and determination possessed much influence and made a hard fight.

My own attitude toward the political parties during the campaign was, of course, one of absolute neutrality. I did not even visit those portions of the islands where the campaign was proceeding for fear that my visit or presence might be used in favor of or against some of the candidates; and I confined my visits of inspection to the non-

Christian and unorganized Provinces where no campaigns were in progress.

At the same time, certain opportunities which came up in the course of due administration were availed of as a means to clarify and encourage the policy of cooperation between American and Filipino representatives in the government. For example, during this period the decision of the supreme court in the board of control cases was handed down, resulting in a complete defeat of the Filipino leaders in their contentions in regard to the board of control and vesting in the American Governor General all titular property rights as to the management of the Philippine National Bank and the other government-owned corporations. The stockholders' elections of these corporations also came up during this period. I let it be known that whereas I proposed to retain and exercise all the powers vested in me by the decision of the supreme court, I did not intend to make any immediate or radical change in the management of these corporations and would devote myself to a careful study of their requirements, and that in such action as I eventually took I would endeavor to carry out the legitimate purposes which the Filipinos had in mind in establishing these corporations so far as that could be done without danger to their security or the violation of more fundamental policy.

During this period I was also enabled in my letter of April 7, 1928, written in reply to Mr. Cornejo to explain my purpose to develop a greater autonomy on the part of the Filipino department heads. (This letter is attached to this report as an appendix.) It was reported to me by the Filipino leaders that this letter made a particularly favorable impression on the electorate. During this period I was also in constant frank conferences with the official leaders of the two legislative houses over matters of general policy, and I have reason to suppose that the attitude there developed was assuring to the supporters of cooperation.

In general, it was my purpose to encourage so far as I could mutual confidence between the two branches of the government and to avoid any action which would tend to arouse misunderstanding or prejudice until the coming session of the legislature, where I expected to develop my constructive program of cooperation.

The result of the elections when they took place in June was an overwhelming victory for the Nacionalista Party, the party which already held the majority in both houses of the legislature. While it did not serve to put forward or clarify any regular party issues, it thus did serve to ratify the attitude of the leaders who had promised me their cooperation in Washington and to generally strengthen that policy throughout the islands.

IV. THE CREATION OF ORGANIZED GOVERNMENTAL MACHINERY FOR COOPERATION

Immediately after the convening of the legislature on July 16, I proceeded with the necessary steps for the creation of the machinery referred to above, intended to secure easy and normal cooperation between the executive and the legislature. The machinery as finally adopted consisted of four steps: (1) Passage by the legislature of the so-called Belo Act making a permanent appropriation of an

annual sum of ₱250,000 (\$125,000) and authorizing the employment therewith by the Governor General of expert advisers and civilian assistants to help him in the performance of his duty of supervision imposed upon him by the organic act of 1916; (2) the appointment of a cabinet nominated by the Governor General from the members of the successful party at the recent election after conference with the leaders of that party; (3) the amendment of the rules of procedure of the two houses so as to vest members of this cabinet with the privileges of the floor, including the right to participate in debate on subjects relating to their respective departments, and the duty, subject to the consent of the Governor General, of submitting to interpolation thereon; and (4) the appointment by the Governor General of a council of state with purely advisory powers, consisting of himself, the cabinet, the presiding officers, and majority floor leaders of both houses.

The necessity for these measures and the reasons therefor have been already fully set forth by me in contemporaneous public statements. (See copies of statements of March 9, 1928, August 8, 1928, August 30, 1928, appendices to this report.) It is sufficient to say here that they were not mere products of any ultimate theories of government, but were directly based upon the necessities of the case as I have observed them during my visit in 1926 and during the progress of my own term. Previous provision for assistance to the Governor General in the performance of his very wide and burdensome functions had been absurdly inadequate; and this served not only to handicap his own efficiency but directly to retard the development of autonomy on the part of the Filipino heads of departments of government, for under the organic act the Governor General is personally responsible for the supervision and control of the entire workings of the executive branch of the government. He, therefore, could not properly delegate autonomous powers to his department heads unless he was given sufficient power of inspection to follow their actions, keep posted on the manner in which their duties were being performed, and thus be in a position to advise and help or admonish and remove when necessary. The passage of the Belo Act was, therefore, the necessary first step toward the development of the whole program of developing Filipino administrative autonomy. The necessity of such further assistance to the Governor General had become more and more evident since the unduly rapid steps in Filipinization under Governor General Harrison had deprived the Governor General of the trained American assistants who had previously held key positions in the civil service of the islands. The Belo Act permitted the employment of expert advisers, presumably for the most part Americans, with which to a certain extent the damage thus wrought could be repaired, and thus provided expert advice from outside when it was not possible to obtain it within the islands.

The choice of a cabinet from the party in control of the legislature was the principal and most direct step toward securing cooperation between that body and the executive. It postulated that in the performance of their administrative duties they should be a loyal part of an independent executive and yet at the same time in constant touch with the legislature, and therefore sympathetic and responsive to the

policies laid down by that body. They were chosen by the Governor General, but only after full conference with the party leaders, and in several cases on the original suggestion of those leaders. Two of these gentlemen had held cabinet positions under my predecessor, General Wood; another had been a former floor leader of the house of representatives besides being a leading figure in one of the principal industries of the islands; still another had been a former member of the house and subsequently one of the most successful of provincial governors; another was recognized both in the legislature and in administration circles as being the leading expert in governmental finance in the islands. Before the legislative session was over this cabinet had thoroughly demonstrated its invaluable character in the service of efficient government and cooperation between its two branches. The secretaries of departments became true and efficient constitutional advisers of the executive. They kept apprised of the currents of public opinion in the legislature and advised the Governor General thereon. At meetings in the council of State with the official leaders of the two houses they were able to advise and guide in necessary amendments to pending legislation. At the close of the session their advice was particularly helpful and usually decisive in respect to the approval or disapproval of the bills which had been passed.

At the same time as administrators in the conduct of their respective departments they showed fidelity, courage, and initiative of a high degree; and the administration of those departments began at once to take a great stride forward over the condition in which they had previously lain. After having had an opportunity to witness the workings of government before their appointment, not only under my own but during my predecessor's administration, I believe that the change wrought by their appointment was little short of revolutionary.

The council of state followed in name and form a body created under Governor General Harrison. But, whereas Governor Harrison permitted a number of statutes to be passed thereafter which transformed the then council of state into an administrative body in which the Governor General might be outvoted by the other members, my council of state, by its terms, was created as purely an advisory body; and public announcement was made by me that it would be continued as such. In that capacity it became during the remainder of my term a very valuable adjunct of cooperation. Up to the last week of the legislative session, we, the leaders of the executive and the legislature, respectively, succeeded in keeping thoroughly abreast of pending legislation. Every bill which was reported favorably by the committees of the legislature or passed by either house up to that time was brought before a meeting of the council of state, discussed there; and if any objections or defects were discovered by the executive, either amendments were readily consented to by the representatives of the legislature or the bill itself held for further consideration. Except for a number of bills which were passed on the last day of the session, too late for conference with the council of state, there would probably have been no vetoes by the executive. With a few simple amendments to the rules of procedure of the two houses aimed to prevent the pressure

and confusion of its final days of session, a situation could be reached in another year in which very few, if any, vetoes would be required, and the technical character and draftsmanship of bills greatly improved.

While, as above stated, these four measures were adopted for the practical reason of accomplishing cooperation in government which was immediately needed and not from any ultimate theories, the success which they met has greatly strengthened my views upon the proper method for the ultimate solution of the Philippine problem, which had been stated by me in an article written for Foreign Affairs in 1927. I now believe more firmly than ever that under the provisions of the present organic act of 1916 there is sufficient flexibility for the working out of Filipino autonomy through the development of a responsible cabinet system which will be both satisfactory to the natural Filipino desire for such administrative autonomy and which, at the same time, will preserve the safeguards against possible mistakes and setbacks which may come in that process. I believe that such a system worked out by the method of administrative evolution under the present law will be far more efficient, satisfactory, and safe than any which is likely to be attained through legislation passed by an American Congress, which necessarily is imperfectly informed as to Philippine conditions. It will have the inevitable advantage which is possessed in all human affairs by the method of gradual evolution by trial and error over any attempt to create at once and for all time a complete system of statute.

But it postulates time and patience and continuous effort and sympathetic understanding between American Governor Generals who are sent to the Philippines on the one side and the party leaders of the Philippine Legislature on the other. And it postulates fundamentally that the economic basis of free trade between the United States and the Philippines, upon which all other progress, both economic and governmental, necessarily depends, shall not be disturbed and threatened by selfish producing interests in the United States. The disturbing influence which even the passage of a few hostile resolutions by American trade associations last winter created in the public opinion of this sensitive people, which can be so greatly influenced for good or evil by its faith in fair treatment from America or the reverse, was sufficient to demonstrate this fact quite clearly.

V. LEGISLATION PROMOTING THE POLICY OF ECONOMIC DEVELOPMENT FOR THE PHILIPPINES

There were two chief elements of this problem, as I have pointed out above, (1) by legislation to remove certain obstacles in the law which prevented the entry of imperatively needed foreign capital; and (2), and much more important, to transform the attitude of the minds of the whole people on this subject, so that they should recognize that such development might, if intelligently handled, be made an aid, and not an enemy, to their aspirations for freedom. To a marked extent both of these aims were accomplished by the events of the first session of the legislature.

I had stressed the importance of economic development in my inaugural address on March 1. This address was printed in English, Spanish, and the principal dialects of the islands and circulated throughout the Archipelago. On July 16 I again devoted my address at the opening of the legislature practically entirely to this subject, pointing out the necessity of amendments to the corporation law as one of its principal topics. (Both the inaugural address and message to legislature are attached to this report as appendices.) An additional document of importance in connection with the question of economic development was a report submitted by Mr. Lyman P. Hammond, vice president of the Electric Bond & Share Co., of New York, who had been requested early in the year to come to Manila and make a thorough survey of the economic possibilities of the country, a task for which he was eminently fitted both by training and experience. He spent several months traveling over the islands and submitted a very comprehensive report of his findings which has been widely distributed and is now available for further distribution. In this report Mr. Hammond emphasizes certain features of the law which tend to discourage the entry of foreign capital. This document was released for publication and made available for the members of the legislature at the opening of the session. While I do not concur with all of Mr. Hammond's conclusions, his observation of underlying conditions was very exact and his criticism valuable and stimulating so that his work served a very useful purpose in the general discussion which soon followed.

I found that, fortunately, there was in existence a joint committee appointed by the Filipino and American Bar Associations of Manila, composed of five of the most prominent and respected lawyers of that city, which had been for some time studying the question of revising the corporation laws. The chairman of this committee became the secretary of justice in my cabinet. I called this committee into conference and urged them to study and prepare the necessary amendments to the corporation law in accordance with the suggestions in my message to the legislature. Bills were then prepared covering these proposed reforms and introduced into the legislature. They provided for a number of technical but vitally important changes in the government of corporations; for the authorization of no-par stock and stock dividends; and, most important of all, repealed certain enactments which forbade any investor to be interested in more than one agricultural corporation and thus opened the door for the formation of investment companies in the principal industry of the island.

The debate which ensued on these measures, not only in the legislature but in the press and in public meetings throughout the islands, was the feature of the legislative session and covered a far wider field than the provisions of the bills themselves. It opened up the whole question of the development of the islands by outside capital, their relations to America, the land policy of the islands, and the relations of capital to labor and to the government. I was told by competent observers that no such fundamental discussion had ever taken place to such a wide extent in the islands before. Against the leaders were arrayed all of the reactionary forces in the islands; an actual racial opposition to change, particularly one coming from without;

the agricultural classes' dislike of the money-lending classes; the small consumers' dread of large business aggregations; and the Filipino fear of Caucasian or other domination. Taking the lead in guiding and crystallizing these hostile elements were certain business interests which were profiting by the existing situation and certain leaders of Spanish thought and culture as distinguished from American thought and culture. The success of the bills would have been very doubtful except for the arrival in August of Senate President Quezon, who had been confined by illness in a California sanatorium. After studying carefully the general principles involved in the legislation, he became convinced of their wisdom and threw himself heart and soul into the leadership of the legislative contest, making speeches in behalf of the bills both before the legislature and in public meetings. On September 27 he gave a large banquet in my honor to which the members of the legislature and the leaders of thought throughout the islands were invited and at which I was invited to express my own views on the issues which had been raised. Under Mr. Quezon's leadership the hostile opinion which had previously been prevalent in native newspapers and circles was won over and the corporation amendments were finally passed.

This dramatic contest and its result produced far-reaching effects throughout the islands. Following upon it, an organization of business men throughout the islands was formed which held a congress in Manila in February shortly prior to my departure at which important economic and business questions were discussed for nearly a week. An economic trend of thought to which the islands had been previously quite unused was thus introduced into their people's lives and this promises to become a permanent element of their progress.

VI. OTHER RESULTS OF THE GENERAL SESSION

In addition to the corporation law amendments the legislature at its general session passed a number of other bills of great importance, some of which had a direct bearing upon the economic development of the islands. For many years there had been most serious delays in the distribution of Filipino homesteads and public lands for agricultural purposes throughout the islands. To ameliorate this condition, certain amendments to the land law, recommended by the bureau of lands, were adopted; and the appointment of 10 new judges of first instance was authorized for the purpose of passing upon questions of land titles and relieving the delays in the courts on this subject, which had previously been the greatest cause of the delay in obtaining title. Another bill was passed clarifying the law as to taxation and government royalties upon coal mining, which was regarded as of important assistance to the projected revival of the coal industry. Two bills were passed to improve the system of ship inspection and the issuance of certificates to foreign vessels. These were intended to secure reciprocal rights for Filipino vessels in foreign ports. Four new government vessels were authorized for the lighthouse service and two revenue cutters for the customs and immigration service, besides the acquisition of a new cable ship. A very important bill with reference to the relation of the Philippines

to the United States was the one equalizing the Filipino tariff on sugar and tobacco with the tariff of the United States, thereby putting an end to the possibility of any criticism that the islands are unmindful of their duty of fair play to the American market.

A much-needed franchise for long-distance telephone communication in the islands was granted, and also two new franchises for foreign radio communication were authorized to the Dollar Steamship Co. and the Mackay Radio Co., respectively.

A start was made toward the realization of a plan long discussed by the Army of obtaining adequate military aviation fields in the islands. It is the intention of the Army, however, to foster commercial aviation, and to a certain extent these fields will be used for that purpose. In furtherance of this plan the legislature passed a bill under which the Philippine government is authorized to acquire fields at Iloilo and Mindoro to be given to the War Department in exchange for property of the War Department at Cebu, which has become extremely valuable for port development but which is no longer needed for military purposes. Good progress has been made under this act in working out the details of the contemplated exchange.

All appointments made during the year were confirmed by the senate, but some few ad interim appointments which had been made by my predecessors were rejected and no action was taken upon several more. Practically all of these cases were justice of the peace and other appointments connected with the administration of justice, and it is to be regretted that political considerations appear to have entered into the action or lack of action by the senate. This list included one American judge, the Hon. J. C. Vickers, who was originally appointed by the late Governor General Wood. Although he has established a very good record the senate has never taken any action on his appointment and he has served for several years as an acting judge only.

More serious was the action taken by the senate in the case of Judge Opisso, an auxiliary judge of first instance, who had been sitting at Iloilo. He had also been originally appointed by Governor Wood, but no action had been taken by the senate and he had been reappointed at the close of each session. This year, however, his nomination was rejected by the senate, for reasons not stated. Acting on practically the unanimous recommendation of the entire bar of the Province of Iloilo, where he had established a reputation as a fearless and independent judge, he was given by me another ad interim appointment as soon as notice of his rejection was received.

When the fact is considered that this was a newly elected legislature, 75 per cent of whose members were new to legislative life and that much of its time in the beginning had been consumed over contests arising in the organization of its committees, the record of legislation produced was highly creditable.

VII. ECONOMIC LEGISLATIVE RESULTS OF THE SPECIAL SESSION OF FEBRUARY

I was obliged to call a special session of the legislature on February 7 just prior to my departure in order to provide money for constructive relief measures made necessary by the great typhoon of

November 23. During this session the legislature, at my request, took up and passed four bills reorganizing the system of bank inspection of the islands and in other respects safeguarding the business of banking and bringing it up to modern conditions. This legislation, which had been long needed, was quite on a par with the corporation bills in importance. The preexisting legislative safeguards for banking in the Philippines had been inadequate and the system of bank inspection very lacking in thoroughness of administration. As a result business conditions in the islands had lived constantly under the threat of financial trouble. The legislature now passed a bill providing for a system of inspection upon the thorough lines prevalent in America and recognized in Federal legislation; and the legislature authorized me to appoint an American expert in banking procedure to put the system into operation and train the personnel. Before my departure I appointed to this position Mr. E. B. Schwulst, formerly of the Kemmerer Commission, who had been serving as my banking adviser.

At the special session there were also enacted some important amendments to the insular irrigation law, to the insular gasoline-tax law, and to several other statutes, all of them long needed and establishing reforms or improvements of great value. This business and economic legislation passed at these two sessions coming within a single legislative year, in my opinion, would constitute an extremely creditable, and even exceptional, record for any State legislature in the United States.

VIII. INTERISLAND SHIPPING

The improvement of this shipping is one of the most important necessities for the future development of the islands. In the character and capacity of vessels, safety, and adequacy of service it is now far behind the requirements of the islands and constitutes a most serious handicap to their development. My immediate predecessor, Acting Governor General Gilmore, just before my arrival, had brought these deficiencies sharply to the attention of the seventh legislature and had succeeded in obtaining the repeal of a statute which, by placing the activities of this shipping too much under the control of the public service commission, was alleged to have produced favoritism and unfair discrimination in favor of certain vested interests. This situation had prevented the entry of new companies into the interisland service. By these means Governor Gilmore had thrown open the door more widely to the introduction of American companies into a service which was being very badly handled by existing companies, chiefly Filipino ones. I took the subject up as one of the principal administrative features of my office and, after many conferences, received the promise of the Dollar Steamship Co. that it would build and place in operation among the islands two first-class modern steamships similar to those of their trans-Pacific lines. At the time of my departure plans and specifications for these vessels had already been prepared and bids for their construction invited among several shipbuilding communities.

Furthermore, finding that one of the chief difficulties to adequate interisland transportation were the shortcomings of the ports and harbors of the different islands and their inadequate wharfage

facilities, I appointed a commission of experts to investigate carefully and report on this subject in time for the next session of the legislature. This is a vitally important matter. Many of the harbors of the Philippines are so deficient in protection that vessels can not land at all during the prevalence of the northeast monsoon. At others the work of landing is often badly delayed. The commission thus appointed contained representatives from the Army and Navy, including an engineer skilled in American river and harbor improvement; and at the time of my departure it was engaged in a thorough and systematic survey of the entire situation, including not only the subject of port improvement itself but also the comparative importance of the different ports and the connection of such ports with commercial possibilities behind them. General interest in the subject which had previously been lacking is now thoroughly aroused, and I believe that with this beginning important and intelligent coordinated progress can be made in the future. The effect of this change in public attitude upon the existing companies who had too long neglected their responsibilities was already apparent, and I received many helpful suggestions from their representatives as well as concrete assistance in shipping problems brought up by the typhoon.

IX. TRANSFER OF RADIO COMMUNICATIONS BETWEEN MANILA AND THE SOUTHERN ISLANDS FROM THE BUREAU OF POSTS TO PRIVATE OPERATION

At the time of my arrival in March, 1928, I found that the telegraphic service between Manila and the south, including the service with the principal cities of Cebu and Iloilo, was in a deplorable condition. All telegraphic lines throughout the islands are operated by the government, through the bureau of posts, and the service is subject in an extreme degree to the disadvantages which usually attend public operation. My advisory radio board, including radio experts of the Army and Navy and the bureau of posts, made a report to me soon after my arrival which showed that telegrams between Manila and the large cities of Cebu and Iloilo required usually seven or eight hours, and often much longer, for their delivery. On looking into the question I discovered that there was a provision in the franchise held by the Radio Corporation of the Philippines (a subsidiary of the Radio Corporation of America), which company was authorized normally only to conduct radio service with foreign countries, permitting the government in its discretion to call upon that company also to perform service for the government within the islands. Taking advantage of this provision, I directed the bureau of posts to call upon the Radio Corporation to take over the radio service between Manila and eight important provincial stations in the islands, including Cebu, Iloilo, Davao, and Zamboanga. Inasmuch as the Radio Corporation did not have stations in these other cities, this postulated willingness on its part to construct them for the purpose of taking over this service. This it agreed to do, the government consenting to allow it to carry on this service for a year after its complete installation, not only as a relief for present conditions but also to serve as a demonstration of the efficiency of private operation as against public operation, in the hope that the

legislature in the future might be prevailed upon to make the service permanent. This transfer caused considerable political hostility and criticism at first, but at the time of my departure the new service had been running between Manila and Cebu and Iloilo for several months with such beneficial results in speed and certainty that I hope that good results may follow from the demonstration.

X. THE GREAT TYPHOON OF 1928

This typhoon began on November 23 and from the width of its path and its unusual duration, rather than from exceptional violence, exceeded in destructiveness almost all of the typhoons which have visited the islands since the American occupation. Coming from the east, its center struck Samar, crossed the Archipelago in a somewhat northwesterly direction, and then recurved in the China Sea, again crossing the northern tip of Luzon. Its principal damage was done in Samar, northern Leyte, Sorsogon, Albay, and Masbate; but further serious damage was done in at least 12 other Provinces. Fuller details of the damage done will be found in the reports of the department secretaries attached to this report.

The noteworthy features to be mentioned were, first, the invaluable assistance rendered by the Navy at a time when all communications were cut off with the stricken Provinces, and, second, the character of the relief which was planned for and is now under way.

The storm completely destroyed all methods of communication, and under normal conditions this situation would have lasted a long time, during which we should have been almost wholly without information as to conditions and unable to plan or distribute relief. Fortunately, however, the fast cruiser division and the destroyers of the Asiatic Fleet had arrived in Manila just before the typhoon and were immediately placed at the service of the insular government by Admiral Bristol. The stricken territory was divided into zones and a vessel containing a relief unit was assigned to each zone with the duty to explore and report through its radio at once. In this way we obtained within a few days information which would otherwise have required several weeks.

The problem presented for relief was peculiar. While an immense amount of immediate damage was done, over 500 lives having been lost, over 25,000 homes being totally or partially destroyed, and over half a million pesos of damage being done to public works alone; yet from the character of the people and the nature of their agriculture, the greatest loss and injury from the disaster will not be felt for several months. The people in the Provinces most sorely afflicted, principally Samar, are habitually upon a very low standard of living. Their houses are of frail construction and the principal crops upon which they depend for a living are coconuts and hemp. While these crops have been seriously damaged, in many places being totally destroyed, and while they will require several years before they can be restored, yet immediately after the storm and as a result therefrom there were made available supplies of fallen coconuts and damaged abaca trees (hemp) which could be used, and were used, for temporary support. Thus the real pinch will not be felt until these temporary by-products of the storm are used up. Unless the real condition is appreciated and appropriate relief

measures adopted, actual starvation from the results of the storm will occur several months after the surrounding world has forgotten all about the storm itself. This feature alone makes for misunderstanding and renders the problem of providing for relief from the charitable contributions of other countries more difficult than in many cases much less serious, but where the whole need can be at once seen and realized and where the damage caused is not so insidious and long in duration as was the case here with the damage to slow-growing trees.

Furthermore, the problem is aggravated by the fact that some of these Provinces, notably Samar, are subject to frequently recurring typhoons; and it is probably due to this fact that the inhabitants have never been able to pull themselves out of a very low standard of physical welfare. In many districts the people are habitually undernourished, and they consequently lack the vigor and initiative necessary to meet such catastrophes. Therefore it is of vital importance not only to relieve the suffering caused by this typhoon, but, if possible, to do it in a way which will help to render the suffering Provinces better able to take care of themselves in the future. It is a situation peculiarly requiring constructive relief rather than mere charity.

With the aid of early information obtained through the help of the Navy, such has been the character of our plans for relief in this case. Donations of food and material relief have been minimized and donations of cash absolutely avoided so far as the government and the Red Cross have been concerned. To provide a food supply which will be available as soon as the temporary stores of coconuts and hemp are exhausted, seeds of quick-growing crops were distributed and the people told how to plant and cultivate them. At the same time, through the department of agriculture, whose representatives have been sent throughout the stricken districts, instruction has been carefully given with a view to trying to achieve a permanent diversification of crops. In this way it is hoped that a situation will not again occur where the entire means of support of a community can be wiped out of existence for a period of perhaps three years.

To help in the reconstruction of houses, building supplies are being obtained and distributed, and projects of road construction and other public improvements are being planned and put through in order to give employment and thus ready cash to help the inhabitants in the rebuilding of their homes. Finally, in order to strike directly at the problem of undernourishment and bad sanitation, with which it is usually coupled, the Red Cross and the government in combination are instituting in carefully selected communities projects of sanitation which will not only give employment relief immediately and ultimate material benefit to the communities involved but which will also serve as demonstrations and examples to the entire surrounding neighborhood.

Appeal has been made to the American Red Cross for assistance in these projects, and such assistance has been promised and given. By these measures it is hoped not only that starvation and suffering will be avoided as the consequence of this typhoon, but that the entire area will be placed in a more self-reliant and effective condition to meet the next one when it comes.

XI. IMPORTANT ADMINISTRATIVE IMPROVEMENTS

Among the administrative reforms accomplished during the year, three stand out as especially important.

1. *Reform budget procedure.*—The organic act provides that the annual budget shall be proposed by the Governor General and also gives him the right to veto items in the appropriation bill, thus providing all the necessary framework for a modern executive budget system, under which the executive could be confined to its proper duty of budget formulation and the legislature to its proper duty of budget decision. I found, however, that in practice the procedure had of late years drifted into a situation where the executive proposed a budget considerably smaller than he was willing to accept; the legislature then raised it to an appropriation act considerably higher than it expected would be approved; and the Governor General subsequently cut it back to a midway point, thus giving the usual opportunity for log rolling on the floor of the houses and between the two branches of government. Owing to the length of time this practice had prevailed, it was impossible to remedy it the first year. On signing the appropriation bill, however, I gave notice that another year a new procedure would be followed by the executive under which the original budget would be prepared with more time and care and the chairmen of the legislative appropriation committees would be given a preliminary opportunity to be heard; that thereafter the legislature would be expected not to add items unless new cause was shown, or with the consent of the executive; and that if they did otherwise they might expect the appropriation bill to be cut rigidly back to the original budget. Before my departure, conferences were held, first, with the presiding officers of the two houses, and afterwards with the council of state, under which a memorandum giving the details of the proposed new procedure was finally unanimously agreed upon and placed on record to be followed for the coming session.

The financial condition of the islands makes such a reform most important. As already pointed out, their revenues are increasing very slowly and there is great demand for public improvements; and unless this demand can be intelligently guided from the standpoint of executive consideration of insular needs as a whole, it will inevitably drift into a haphazard distribution of new roads and schools. In such a case, such farsighted reforms as general port improvements, which are not particularly popular with the legislature, would have small chance of realization.

2. *American expert advice for the bureau of health.*—This bureau was one of those in which subsequent experience has clearly shown that the Filipinization process adopted under Governor General Harrison was too rapid. In general, and with many honorable exceptions, the professional standards of the physicians and inspectors upon whom the sanitation and health of the islands depends are far below what they should be. It thus seemed imperative that expert assistance of the highest character should be brought in to guide not only in the general policies of the bureau of health, but so far as possible in the inspection of its personnel, and thus gradually tonic up the health service of the islands. For this purpose I was fortunate in securing the services of Maj. George A. Lull, of the

Army Medical Corps. Major Lull came to me with the highest recommendations of his chiefs at Washington and with an admirable record as an expert in tropical sanitation and medicine. He became the recognized adviser of the bureau of health, being consulted in all important matters before action was taken and had inaugurated a program which I feel sure under the circumstances accomplished the best possible results with a minimum of friction.

3. *Forest Reserve to protect the watershed of the Mountain Province.*—A long personal trip of inspection, which I took in May, 1928, through the Mountain Province, revealed the imperative need of such a reservation. The pressure of the population, which is increasing in the Province, has resulted in the encroachment of settlements upon the forests which crown the mountain ranges in which are found the sources of its mountain streams and rivers. These streams are the source of the systems of irrigation which fertilize the wonderful rice terraces and rice fields upon which the support of that hardy population imperatively depends. To permit this encroachment to go on unchecked would, sooner or later, result in the diminishment of this water supply and a gradual starvation of the Province. Accordingly, on the advice of Governor Early, of the Mountain Province, and after a careful examination of the situation by Director Fischer, of the bureau of forestry, an executive order was signed on February 16, 1929, setting aside throughout the Province the forests along the summits of the mountains, where they were necessary to the preservation of this stream flow. I believe that the step thus taken is not only important for this situation in Luzon but that it will establish a valuable precedent to be carried out in certain other islands where a similar situation may be found to exist—for example, on the islands of Negros and Mindanao.

Many other administrative reforms were taken of considerable importance to the current administration of the islands; but it is believed that the foregoing three represent those of the most permanent importance. Some of the others are enumerated in the body of this report.

SUMMARY

It is self-evident that the things accomplished during the past year are but the beginning of what should be a carefully planned and worked-out development of a great insular program. It is also evident that insufficient time has elapsed to appraise the value of even the things that have been done. I had hoped that by the end of another year not only should we have proceeded toward the solution of many other questions which were under discussion but that we should have a much clearer appraisal of the permanent value of what had been done. I can, therefore, only state my views as to the progress up to date with many mental reservations. But this much, I think, has been done:

Certain governmental machinery of cooperation has been established which has already shown itself to be of distinct value and, what is much more significant, indicates a very hopeful line for future development in the solution of this most difficult problem of joint action between America and the Philippine Islands. This machinery has already served to make possible a very fruitful legislative session and, what is even more important, has, so far as it has

gone, satisfied the natural Filipino anxiety that the promised development in Filipino autonomy had not been forgotten but was going ahead. This, of itself, has operated to allay antagonism, restore confidence in America, and terminate, for the present at least, the previous agitation for an immediate determination of the future political status of the islands. Toward the end of my stay, however, the tranquillity thus accomplished was again rudely disturbed from sources entirely outside the islands—namely, by the agitation in the United States for a tariff change adverse to the islands. Thus the former anxiety of the Filipino for a definite settlement of his political status, which had been temporarily allayed, was renewed in the shape of an anxiety about his economic status.

In the second place, during the year there was given a great impetus toward a general mental change on the part of the people themselves in which they have come to consider, almost for the first time, the industrial and economic foundations of their political problems. The general change and progress in this respect is very noticeable and not only constitutes a hopeful factor as to future Filipino development but also serves as an assurance and, to some extent, a guaranty that the attitude taken by the Filipinos toward all business questions, including that of the investment of foreign capital, will be enlightened and of a nature to make such investments secure. Even to-day this change of attitude has been sufficient to be noted by the representatives of American business and to be seized upon as a ground for marked encouragement.

In the third place, and perhaps most important of all, the cessation of the period of acrimonious deadlock and the substitution therefor of a period of recognized cooperation and friendly feelings has produced a general amelioration in the relations of Americans and Filipinos, which is of marked encouragement for the future success of the problem in hand.

The reports of the department secretaries, which are attached to this report as appendixes, give full detailed information regarding the operation of the government, but the following brief comments point out certain outstanding features of interest. In general, the year has been a fairly prosperous and satisfactory one, with the single exception of the typhoon mentioned before. Public order has been excellent, health conditions have been good, government finances are in a sound condition, and the general prosperity of the people is evident.

THE DEPARTMENT OF PUBLIC INSTRUCTION

The Vice Governor General, the Hon. E. A. Gilmore, who is ex-officio secretary of this department, served as acting Governor General until March 1 and shortly after that departed for the United States on official business, returning on October 29. During these two periods the undersecretary, the Hon. Alejandro Albert, was in charge of the department. Under the supervision of this department are the large and important bureaus of education and health, and the smaller but not less important quarantine service. In addition, the secretary is ex-officio chairman of the board of regents of the University of the Philippines. The administration

of public schools is carried on through the bureau of education and the supervision of private schools is conducted through the commissioner of private education, who is directly under the department secretary.

THE BUREAU OF EDUCATION

There were 1,111,566 pupils enrolled in the public schools during the year. This was a slight increase over the enrollment for the previous year. The increase in the school enrollment does not quite keep pace with the increase in population, however. It is estimated that 35.45 per cent of the children of school age were enrolled in the public schools during the year, which was a slight decrease from the previous year. The fact that funds are not available in amounts commensurate with the increase in population is the principal cause for the decrease. The total government expenditure per capita for education was ₱2.35, an increase of over 8 per cent, but this increase in funds available has been absorbed in caring for the increased enrollment in the relatively more costly higher grades and in providing teachers of higher attainment.

More than 28 per cent of all expenditures of insular funds are for education as against about 11 per cent of provincial and 29 per cent of municipal funds. The problem of providing increased funds for education, therefore, would appear to be one for the local branches of the government to handle.

It would be highly desirable to have more American teachers for instruction in English, but with the limited funds available it is possible to employ only enough to handle the English courses in the normal schools and in the upper grades of the high schools.

While it is not possible to expand the school system to any appreciable extent at this time, the situation is by no means discouraging. The enrollment is tending to spread out over the various years, showing that a larger proportion of students is receiving more than the mere fundamentals; the professional training of the entire teaching force is being decidedly improved; vocational training is making steady progress; and, most encouraging of all, the legislature manifests an intelligent understanding of the real needs of the situation and has stood ready to make provision for needed improvement in the present system rather than unlimited expansion without regard to the quality of the schools established.

The schools have always emphasized the importance of public health and sanitation, and no more effective means for the dissemination of information along the lines of proper diet, sanitation, etc., can be found in the Philippine Islands. It was decided, therefore, to greatly increase the emphasis on this phase of the school work. Provision was made by the legislature for a specialist to revise the curricula with that end in view. The government was also fortunate in being able to secure the services of Miss Sally Lucas Jean, of the Metropolitan Life Insurance Co., who agreed to come to the islands for a few months during 1929 in an advisory capacity to assist in inaugurating a program of health education along lines in which she is a recognized expert.

PRIVATE SCHOOLS

During the year there were 84,813 students of all ages and grades enrolled in the private schools. This enrollment has slightly decreased for the past two years, but the decrease has been caused by the insistence on the part of the government of higher standards. Students from recognized private schools are entitled to transfer to government schools without examination, and for this reason steady pressure has been exerted during the past few years to bring standards of instruction up to a point where they would compare reasonably with government schools. The situation has been improved to such an extent that practically all weak schools have been brought up to standard or closed. Practically all instruction in these schools is now in English, the larger schools and universities now employing large numbers of American teachers, contrary to the practice of former years. A few institutions are doing work of a very high order under most capable instructors.

BUREAU OF HEALTH

The general health situation has been practically as in previous years. There were no epidemics of a serious character, and such statistics as are available for the year indicate that vital statistics will be approximately the same. A considerable decrease in the marriage rate is noted, due perhaps to the too onerous provisions of the new marriage law. There were 16 sporadic cases of cholera with eight deaths, reported from the Provinces, and two cases in Manila, neither of which was fatal. Five cases of varioloid were reported, all of which recovered. It is thought that some of these may have been chicken pox. Typhoid, dysentery, and diphtheria still exact too high a toll of life, but the situation is not materially worse. The same is true of tuberculosis and malaria. Experimental work was done with plasmochin in the treatment of malaria and preliminary reports indicate that this drug has considerable possibilities in the treatment of this disease.

Two new hospitals were opened in the Provinces during the year with a total capacity of 72 beds. Several other provincial hospitals are in the course of construction, the funds providing insular aid having been released. When they have been completed all but a few of the smaller and poorer Provinces will be provided with hospital facilities. Under present provisions of law these Provinces do not have sufficient income to maintain hospitals once they are established and special legislation will be necessary to correct this situation.

The new insular insane asylum had several units completed at the end of the year and all female insane had been transferred from San Lazaro Hospital. With the final completion of this hospital, facilities will be available to care for the insular insane in much more satisfactory quarters than those formerly provided, which have been anything but a credit to the insular government.

The regular antileprosy activities have continued much as in previous years with an average of approximately 5,500 inmates at the Culion Leper Colony and 350 each in the Manila and Cebu detention stations. New lepers found bacteriologically positive were segre-

gated as discovered; they were practically the same as in recent years, about 750. While the number segregated annually has not declined, the fact that more and more patients are presenting themselves voluntarily for treatment in the early stages of the disease is most encouraging. Treatment was given to practically all the patients in the detention stations and to about 3,500 at Culion.

Well over 400 patients were released from the three stations. This is the largest number released in any one year and brings the total number so released since the inauguration of the special treatment work in 1921 up to practically 1,600.

The Leonard Wood Memorial for the Eradication of Leprosy started active preparatory work early in the year. This organization is a corporation holding funds collected in the United States to aid the Philippine Government in research on leprosy and antileprosy measures. It was organized to continue the movement inaugurated by the late Governor General Leonard Wood and in appreciation of his deep interest was named in his memory. Responses to the appeals made for funds have been most generous. The corporation is essentially independent of the government with headquarters in New York, but will work in closest cooperation with it, through a Philippine committee composed of the members of the board of directors resident in the Philippines. At present these are the Governor General (chairman), Dr. Alejandro Albert, undersecretary of public instruction, and H. W. Wade, chief pathologist at Culion Leper Colony. A donation of ₱360,000 was made by Mr. Eversly Childs, of New York, expressly for a new treatment station at Cebu. Preliminary work on this project was promptly started by the memorial's representatives, and actual construction of buildings had started before the end of the year on a site of over 50 acres donated by the Province of Cebu. This institution will have a capacity of 150 beds at the outset and will be one of the finest institutions of its sort in the world.

The rehabilitation of the discharged leper still presents a problem, as on account of prejudice or mutilations resulting from the disease they find great difficulty in reestablishing themselves in society. In some cases it has actually been necessary to permit them to return to Culion to spend the rest of their lives.

BUREAU OF QUARANTINE SERVICE

This bureau is administered by an officer of the United States Public Health Service, who becomes ex officio chief quarantine officer for the Philippine Islands. During the year Surg. C. R. Eskey was relieved by Surg. R. W. Hart. The fact that cholera, smallpox, and bubonic plague were present in more or less epidemic form in many ports in close proximity to the Philippines, yet did not make their appearance in the islands, speaks well for the efficiency of the service.

UNIVERSITY OF THE PHILIPPINES

The university is growing rapidly, so rapidly, in fact, that it is unable to keep pace in buildings, libraries, and competent instructors with its enrollment. The system of electing members of the board of regents is not everything that could be desired, as political con-

siderations become a factor. The institution is fortunate in having at its head a man of the caliber of its president, the Hon. Rafael Palma. He is a man of broad vision coupled with fearless independence.

DEPARTMENT OF FINANCE

Complete details of the financial operations of the government will be found in the report of the secretary of finance, but the following will give a brief summary of the outstanding features:

	1927	1928	Per cent of increase (+) or decrease (-)
Total budget revenue (actual).....	P77,728,114.33	P85,214,508.03	+9.6
Total budget revenues (estimated in budget).....	72,289,450.00	79,161,060.00	+9.5
Total budget expenditures (actual).....	74,346,267.33	79,626,806.96	+7.1
Total budget expenditures (estimated in budget).....	76,102,487.00	74,972,495.79	-1.5
Total budget surplus.....	35,591,566.39	41,179,267.46	+15.7

From the surplus of ₱41,179,267.46 on December 31, 1928, there are items to be deducted amounting to ₱28,000,000, thus leaving a net unappropriated cash surplus of ₱13,179,267.46.

The items to be deducted consist as follows:

Estimated yearly outstanding appropriations.....	₱3,500,000
Estimated yearly continuing assets, net.....	16,000,000
Estimated yearly advances to money-order fund.....	6,500,000
Balance of commitment for the purchase of shares of stock of the Manila Railroad Co. for the extension of its lines to the Bicol regions, authorized under Act 3116.....	2,000,000
Total.....	28,000,000

From these figures it will be seen that the government it in a position to adequately provide for all existing expenditures. Receipts are well in excess of expenditures and the surplus shows a moderate increase. As additional evidence of the prosperity of the government and the people it is noted that there was an increase of almost 27 per cent in the amount collected as income taxes; an increase of nearly 5 per cent in the collection of internal revenue; an increase of over ₱2,000,000 in the amount of currency in circulation; and that the total trade of the islands amounted to over ₱579,000,000, an increase of nearly 7 per cent over the previous year (all of this increase was due to increased imports). Of this total foreign trade it is of interest to note that 69 per cent was with the United States, imports from there amounting to over ₱167,000,000, an increase of over 17 per cent. About 45 per cent of the total trade of the islands was carried in American vessels. The importation of cotton goods, iron and steel, mineral oils, meat and dairy products, automobiles, wheat flour, silk, and paper in every instance registered an increase over the previous year. More than 50 per cent of all of these articles are imported from the United States, and in the case of iron and steel, mineral oils, automobiles, and wheat flour, well over 75 per cent. There was a decrease in the value of sugar, abaca, coconut oil, maguey, and tobacco exported; in fact, a slight decrease in the total exports, but the balance of trade is still in favor of the islands.

While all of the foregoing is a matter of satisfaction, it should be borne in mind that the satisfactory condition of government finances has been achieved by the most rigid economy and the limit of expendable revenue has practically been reached. Large sums are still needed for public education, public works, health, etc.; and to provide adequate funds for these, new sources of revenue must be found which can only come from increased development to provide additional revenue.

Early in the year the secretary of finance was appointed chairman of a committee to investigate certain features of the customs service and immigration. This committee conducted lengthy hearings and submitted a very carefully prepared report which is still being studied. It is evident from this report that there is room for considerable improvement in the administration of certain features of the immigration service, in particular.

The net bonded indebtedness of the government at the end of the year was ₱175,237,000 for which there were accumulated sinking funds amounting to over ₱43,000,000. The bonded indebtedness was increased during the year by ₱7,252,000, which covered bonds issued for the improvement of the port works at Cebu and Iloilo and various bonds issued for the accounts of Provinces and municipalities. This indebtedness is still well within the limits established by the organic act which provides for a debt limit of 10 per cent of the assessed value of the taxable property in addition to ₱14,000,000 issued for the purchase of the friar lands and ₱20,000,000 which the insular government may issue to be secured by insular and municipal bonds. These make a total debt limit of over ₱206,000,000.

THE GOVERNMENT IN BUSINESS

The commercial enterprises in which the government has a substantial investment of capital had satisfactory operating results for the year 1928, as may be seen from the following:

Philippine National Bank.—The net profit of this institution for the year 1928 was ₱2,885,000, compared with ₱4,038,000 for 1927. Operations for 1928 covered more normal conditions than prevailed during 1927, because in the latter year there was included in the earnings a large amount of back interest due by the sugar centrals in which the bank is interested. Loans to those centrals were reduced during the year from ₱39,250,000 to ₱34,403,000.

The bank has made considerable progress in carrying out the provisions of the so-called rehabilitation act passed in 1924. Since December 31, 1924, the circulation of the bank has been reduced from ₱32,336,160.50 to ₱15,500,000, indicating a total reduction of ₱16,836,160.50. Of this reduction ₱6,800,000 was accomplished in 1928. Under the terms of the rehabilitation act the insular treasurer deposited in 1924 ₱8,084,040 with the bank to cover the 25 per cent reserve required against circulating notes. This deposit has been entirely liquidated by the bank, the account being finally closed in January, 1928. Also in accordance with the provisions of the rehabilitation act the bank has continued to purchase for account of the government shares of its capital stock outstanding in the hands of the public, with the result that on December 31, 1928, there were only 2,446 shares out of 28,800 not owned by the government.

During the year the bank commenced the repayment of a part of the total contribution made by the government in 1924 for the purpose of writing off doubtful and bad assets which amounted to nearly ₱62,000,000. The sum of ₱3,463,076.68 was repaid during 1928. This sum was made up as follows: ₱2,163,662.14 from net profits and ₱1,299,414.54 from the reduction in the circulation reserve. This reserve is automatically reduced as circulation is retired.

During the year an examination was made into the affairs of the Philippine National Bank by Mr. Earl B. Schwulst, whose services were especially contracted for that purpose by the bank upon the suggestion and recommendation of the Governor General. Mr. Schwulst's report is now in the hands of the Governor General and his recommendations are receiving careful consideration.

Cebu Portland Cement Co.—The operations of this company were satisfactory during the year 1928, the net profit amounting to more than ₱430,000 as compared with approximately ₱375,000 for 1927. This profit was the result mainly of the improved prices for cement which ruled during the year. The company's balance sheet dated December 31, 1928, shows that it is occupying a fairly comfortable financial position, inasmuch as the proportion of its indebtedness to its current assets and to its net worth is comparatively low. It is only during the past two years that the company has been able to eliminate the substantial deficit which had been previously incurred due to losses sustained from unprofitable operations.

Manila Railroad Co.—The operating results of this company during 1928 have been very satisfactory. The net income amounted to ₱3,041,000, an increase of nearly 38 per cent over the average net income for the five years ended December 31, 1927. The operating ratio of the company is very low. The management has been pursuing the policy of devoting the net income to the retirement of indebtedness and to the expansion of the company's facilities; therefore no part of the income for 1928 has been used for paying dividends. The equipment and other physical property of the company are being improved and are well maintained. During the past four years the company has liquidated all but ₱250,000 of the total sum of ₱1,598,508.80 representing advances made by the government for the purpose of enabling the company to pay interest on its bonded indebtedness. During the past five years the company has reduced its total bonded indebtedness through purchase in the open market by the sum of ₱2,181,000. Substantial amounts of the net income were devoted in 1928 for the purpose of liquidating the debt to the government on account of interest and for the purpose of purchasing bonds on the open market.

Manila Hotel Co.—This company reports net profits for the year 1928 of ₱117,539.78 as compared with ₱91,396.47 for the preceding year. The increase in net profit has resulted from economical operation rather than from an increase in the business done by the company. The financial position of the company as reflected by its balance sheet is fairly satisfactory, inasmuch as on December 31, 1928, the total indebtedness of the company amounted to only approximately ₱258,000, as compared with a net worth of over ₱1,344,000. Of the indebtedness only ₱68,000 was current as compared with total current assets of nearly ₱296,000.

THE DEPARTMENT OF THE INTERIOR

This department exercises administrative supervision over the various Provinces and municipalities through the executive bureau and the bureau of non-Christian tribes and general supervision of peace and order through the Philippine Constabulary.

The local officials in the Provinces under both the executive bureau and the bureau of non-Christian tribes in general discharged their duties in a very satisfactory manner. There was an encouraging increase in the collection of taxes and in the assessed valuation of property. The elections which were held during the year were notably free from disturbances. The fact that the percentage of registered voters was increased by more than 15 per cent since the elections of 1925 and that over 80 per cent of those registered actually cast their votes is an indication of the wide public interest in governmental affairs. In the Provinces under the bureau of non-Christian tribes peace conditions were much better than usual. Tax collections, which have been the cause of so much trouble in some of these Provinces in the past, show that the Moro people are more and more convinced of the advantages of properly organized government. The number of non-Christian people employed in the government service is being increased as fast as circumstances permit. This has for years been one of the principal complaints of the people of these Provinces.

The Philippine Constabulary maintained its former high reputation. It was necessary to place the control of the municipal police forces of several municipalities under the constabulary during the year, particularly of several towns in close proximity to Manila, where the control of vice conditions presents a difficult situation. The situation with regard to municipal police is one of the most unsatisfactory features of the entire system of local government. Control of the local police, unless taken over by the constabulary, is lodged with elective officials, and their appointment is too often influenced by political considerations.

The affairs of the city of Manila were ably directed by a very competent mayor, the Hon. Tomas Earnshaw. An act providing for a bond issue of ₱10,000,000 for permanent public improvements in the city was passed by the legislature. The long-standing controversy between the city and the metropolitan water district over the payment for water consumed by the city was settled to the satisfaction of all concerned during the year.

THE DEPARTMENT OF JUSTICE

The administration of justice in the justice of the peace courts has in the past been the weakest point in the entire system of the Philippine government. In an effort to improve this situation the policy was adopted of placing the responsibility for the appointment to these positions upon the shoulders of the judge of the district where the appointment was to be made. The judge was required to certify that he knew the applicant, was not connected in any way by family or other ties, and that in his opinion the applicant would impartially discharge the duties of the office. Ability to handle cases in the English language was made a requirement in practically

every case. This policy, in fact, was followed in the appointment of all judicial officers.

No changes in the membership of the Supreme Court of the Philippine Islands occurred during the year 1928. The court was able to dispose of 1,827 cases during this period, which statement in itself shows that relief for the court must be found. With this purpose in view, a bill providing for an intermediate court of appeals was approved by the Philippine Legislature, but it was necessary to veto it because of the lack of an adequate provision safeguarding the higher supervisory authority of the supreme court over the decisions of the proposed court of appeals.

There came to light in August, 1928, a series of cases of fraud and irregularity in the conduct of the bar examinations. These examinations are conducted under the general supervision of the supreme court, and investigation revealed a situation of lamentable looseness in the way in which this had been done, particularly in the marking of the candidates. The supreme court named the prosecuting attorney of the city of Manila as its special representative, and the prosecuting attorney, after a thorough investigation, secured about 20 convictions. The investigation also resulted in the elimination of a number of employees of the supreme court, including three private secretaries to the justices. At the conclusion of the work of the prosecuting attorney, he made his report, and thereafter the court named the director of civil service to take up the investigation where the prosecuting attorney had left it and to conclude the administrative features. The director of civil service has recently submitted his report, making certain recommendations which were substantially agreed to by the court. The director concluded with this observation: "The undersigned is satisfied that all the guilty parties have already been punished, and that the court can rest assured that the present personnel of the office of the clerk of court is above suspicion and criticism."

The situation with regard to the congestion in the courts of first instance was not materially improved during the year. This may be accounted for by the large number of election cases which were filed and the fact that four vacancies occurred during the year among district judges, which could not be filled immediately. With the filling of these vacancies and the appointment of 10 new judges, provision for which was made by act of the legislature during the year, this situation should be greatly improved in the near future. The main purpose in providing for the 10 new judges was to speed up the registration of land titles, as the large number of such cases pending has been a matter of grave concern.

Insular prisons were handled in a manner reflecting great credit upon the officials concerned. They are too congested, however, particularly Bilibid prison, in the city of Manila. Plans are being considered to move the prison outside the city, and, with this end in view, a committee of competent men was appointed during the year to study the matter and make suitable recommendations as to available sites and probable cost. This committee also made a study of the entire situation as to government offices, hospitals in the city, etc. Their report, which was submitted late in the year, should be of great assistance in solving the problems involved.

THE DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES

This department suffered a great loss on September 22 in the death of Undersecretary Silverio Apostol, who had for several years served as acting head of the department. In his death the country lost an energetic and conscientious public servant. To fill the position left vacant by Mr. Apostol's death, Mr. Jorge B. Vargas, for many years director of lands, was appointed on October 1.

The total value of all agricultural crops suffered a decline during the year due principally to unfavorable weather conditions and several destructive typhoons. Damage caused by locusts and other plant pests was much smaller than in previous years, however, as was damage caused by diseases of animals.

The total cut of sawmills and logging companies was considerably larger than the previous year and exports of lumber and logs increased by 19 per cent. The foreign market of Philippine lumber was affected during the year by the adverse decision of the Federal Trade Commission in the Philippine mahogany case and by the passage of adverse tariff laws in Australia. These matters are not of fundamental importance, however, and the future of the lumber industry seems to be full of promise.

Some progress was made in the matter of transferring public land to private ownership, but the problem of getting the large areas of available land in the hands of the people in the shortest time possible is the gravest one confronting the government. Mr. Lyman Hammond, in his survey of economic conditions in the islands, estimates that there are 14,000,000 hectares of idle land suitable for cultivation and that at the present rate of progress 400 years would be required to get it under private ownership and under cultivation. That the legislature realizes the seriousness of delays in land cases is evidenced by the approval of the bill providing for 10 new judges, with the provision that, unless otherwise required by the interest of the service, they should be designated to hear land registration and cadastral cases. An amendment to the public land law was also passed somewhat improving the facilities for obtaining patents to public lands.

The bureau of science handles the manufacture of vaccines, serums, etc., for other branches of the government and does a large amount of routine testing and work of similar nature. The bureau works in close harmony with the United States Army Medical Research Board and the Rockefeller Foundation and much valuable scientific research is carried on.

DEPARTMENT OF COMMERCE AND COMMUNICATIONS

More than 350 kilometers of first class roads were added to existing mileage during the year and several important bridge projects were practically completed. A 13-span steel bridge at Cabanatuan on the Manila North Road to Baguio will be completed early this year.

The report of the bureau of posts shows a continually increasing amount of business of all kinds handled. Ordinary mail, registered mail, and money orders are handled in annually increasing amounts indicating not only a thriving condition economically but also an increasing use by the people of the comforts and conveniences of modern civilization. It is interesting to note that money orders sent

out of the islands totaled less than ₱2,000,000 while orders coming into the islands amounted to over ₱11,500,000. Of this amount more than ₱6,500,000 was sent from the territory of Hawaii alone where large numbers of Filipinos have emigrated and are evidently prospering.

The government in 1927 closed a contract for 200 miles of submarine cable and in 1928 ordered 100 additional miles. This cable has not yet been delivered owing to difficulty encountered in securing a suitable cable ship as the one in service was not equipped to handle the work. Negotiations are now under way for either the purchase or charter of a suitable vessel.

The future of interisland communication would seem to lie in the direction of increased use of radio. Of the steps which have been taken in this connection mention has been made in the earlier portions of this report.

The government owns and operates through the bureau of commerce and industry four vessels. They are used for lighthouse and cable work, customs work and inspection trips of the Governor General. However, these vessels are expensive of operation, old and of doubtful seaworthiness. The provision which was made by the legislature to supplement and replace these vessels fills a long-felt want.

Rumors of serious irregularities in certain of the bureaus under his supervision prompted the Hon. Filemon Perez, shortly after his appointment, to look carefully into the affairs of his department to determine the truth or falsity of these reports. He soon satisfied himself that the bureau of commerce and industry was not functioning properly and appointed a competent committee, which under his direct supervision began a thorough survey of the bureau. This committee soon uncovered irregularities of a serious nature, involving high ranking officials. The investigation was still uncompleted at the time of my departure, but under the vigorous and courageous direction of Secretary Perez results had already been attained which indicated that the final result would undoubtedly greatly improve the service not only in this particular bureau but in the entire department. Plans were being laid to conduct similar investigations in other bureaus which were not functioning to the satisfaction of the secretary. This action of the department secretary was taken entirely on his own initiative and is being pushed through with courage and energy which reflect the highest credit upon him.

The annual exodus of Filipino labor continues as previously. This arises from the fact that, although the islands as a whole are underpopulated, in certain Provinces, particularly in northern Luzon and in the island of Cebu, the population has become congested and there is an insufficient opportunity for employment. This situation emphasizes the importance of a wise and comprehensive attempt to develop the economic resources of the Archipelago as a whole, with the aid of foreign capital if necessary. If this were done, abundant opportunity would be offered for all of the existing Filipino labor and much more.

The following officers of the Army and Navy were attached to the office of the Governor General for the whole or a part of the year. Brig. Gen. Halstead Dorey, Col. Blanton Winship, Col. Matthew

De Laney, Commander Jules James, Maj. George A. Lull, Maj. Arthur P. Hitchens, Capt. E. A. Regnier, and Lieut. M. F. Grant. Mr. H. C. Anderson, of the United States Treasury Department, was also assigned to duty with this office. Mr. E. B. Schwulst was engaged under the provisions of the Belo Act as an advisor in financial matters and Mr. E. G. Crossman as legal assistant. Mr. G. C. Howard, American Trade Commissioner for the Philippines, and Mr. H. T. Edwards, of the United States Department of Agriculture, while not attached to the office, worked in close harmony. Mr. Frank O. Affeld and Mr. George Stoner were employed as legal assistants under the provisions of the Belo Act. Mr. C. W. Franks and Mr. Richard R. Ely continued in their former positions as secretary and assistant secretary to the Governor General and Mr. G. H. Keatley was private secretary to the Governor General. Mr. O. E. Lautzenheizer continued in his former position of confidential cable clerk. All of the above-named men rendered very valuable assistance.

The vice governor, the Hon. E. A. Gilmore, rendered very valuable assistance during the year. Great credit is due him for the able manner in which he handled the administration of affairs while acting as Governor General.

I wish also to acknowledge the valuable services to the Philippine Government of Admiral Mark L. Bristol, Maj Gen. William Lassiter, and his successor Maj. Gen. Douglas MacArthur and the forces under their command. The relations between the Philippine Government and the armed forces of the United States were never more harmonious and the credit is due to the tact and diplomacy of these officers. It is a source of great satisfaction to be able to feel free to call upon the Army and Navy for assistance in a time of emergency, which frequently becomes necessary, and know that it will be instantly and freely available.

A report of this nature would be lacking in fairness and justice which did not make acknowledgment of the fundamental loyalty of the people of these islands to the United States Government. The great mass of the people and government officials are animated by a sincere wish to do what is right and, consistent with their own rights, to do what they believe the home government would wish them to do. I wish to make particular acknowledgment of the unswerving support of the president of the senate, the Hon. Manuel L. Quezon, who on innumerable occasions, showed courage and leadership of a very high order, by supporting policies which did not at first meet with general public approval. The loyal support of many other members of the legislature, the department secretaries, and officials in general is also gratefully acknowledged.

Very respectfully,

HENRY L. STIMSON,
Governor General.

APPENDIX A

BAGUIO, April 7, 1928.

DEAR MR. CORNEJO: You have written me and sent me a number of telegrams urging me to intervene and suspend the sale of the lots at Malibay which is being conducted by the bureau of lands. I have given your request careful consideration and have decided not to intervene.

In the first place, I find that similar applications have been made by you to my predecessors, who after careful consideration declined to interfere. I do not regard it as conducive to the efficient conduct of government that I should encourage the making to me of applications to reopen matters which have already been regularly and formally decided by my predecessors.

In the second place, the questions upon which the making of these sales depends are matters of determination which is placed by law in the hands of the director of the bureau of lands and his subordinates. The procedure under which he should act and the considerations which should govern his action are carefully prescribed by law, subject to such appropriate judicial review in the courts as the law also gives. The organic law, which forms the basic constitution of our government in the islands, certainly does not contemplate that I should substitute my own personal judgment for the official judgment of the various executive officers to whom by law the administration of such details as the sale of those lots is intrusted in the conduct of the insular government. The great power of supervision and control over the executive functions of government which that organic law imposes upon me should ordinarily not be invoked to interfere with the conduct of government by my subordinates, unless they have been guilty of some misconduct or neglect deserving of grave reprehension or even removal from office. The investigation which I have caused to be made in this case indicates that no such situation exists.

In one of your telegrams you stated that an injunction had been granted by the Court of First Instance of Rizal, but that the court had subsequently vacated the injunction upon a report through the press that I wished to have the sale of the lots proceed. Upon receipt of this telegram containing that statement, I at once communicated with the judge of that court and informed him that such a report if it had been published was entirely erroneous and that I did not in any way wish to interfere with his procedure in the case. By these actions which I have taken I believe that the requirements of justice in this case have been fully satisfied so far as the functions of my office are concerned. I should regret it extremely if any of the poor inhabitants of Malibay, whom you describe in your letter, should through misunderstanding lose homes or property which they were in a position to purchase under the law. But I feel that if you have advised them not to bid for these homes or this property and they have lost it through following your advice, the responsibility must rest upon your shoulders and not upon mine.

Very truly yours,

_____, Governor General.

APPENDIX B

STATEMENT FOR THE PRESS

A member of my cabinet has suggested that a statement of my views on the Kiess-Willis bill would relieve apprehension and misunderstanding here. It appears that there is fear lest I will create a supercabinet in case the bill is passed or interfere with the development of responsibility and autonomy among the present department heads. No greater mistake could be made. The Kiess bill contemplates two classes of appointments by the Governor General, first, technical advisers, and second, assistants to perform duties of investigation for him. The need for the first is becoming more evident every year. In my inaugural address, I alluded to the necessity of stimulating

economic development in these islands. During the past forty years the Philippines have failed to make the progress which their friends have desired in the diversification of their agriculture. In some respects it may even be said that they have been approaching a one-crop development. Forty years ago they lost the cultivation of coffee, which had previously been an important crop, but unlike Java which suffered the same loss at the same time they have never restored that crop. To-day there is reason to believe that their monopoly in hemp is threatened both by disease and by the cultivation of substitutes in other competing countries. While other industries have to some extent been introduced, I think all friends of the islands will agree that the progress and development of a wide and diversified agriculture has not been as rapid or energetic as our needs demand and to-day we are too much dependent upon the prosperity of our chief crop, sugar.

It is my intention, if granted the financial resources provided in the Kiess bill to use a portion of it in the employment of the best possible advisers, both for advice on the kinds and methods of crops and industries needed and also as to the financial methods necessary for the safe encouragement of such new crops. I feel keenly my need of such advice and believe that any Governor General in my position would feel his own needs as I do. Such advisers would not be permanent appointees; they would not become a part of a permanent staff; they might not even be appointed on full time. They would be sought for in all places and under all conditions where the best men could be found to do a specific work or make a specific report, and would leave when that work was done. It is clear that special provision must be made for such employment and that it can not be left to the routine of the permanent civil staff of the islands.

The other class of assistants contemplated by the act are men to perform special investigation for the Governor General in the exercise of his duties of "supervision and control" under the Jones law. But in this there is no intention of interfering with regular departmental inspection and supervision. The department of the interior has an executive bureau which regularly performs such work and has done it very well in the past. Every department head will be expected to rigidly supervise and inspect his department in the future and will be held responsible for it. But your own law, in section 64 of the administrative code, imposes upon the Governor General the duty of making "when in his opinion the good of the public service so requires, an investigation of any action or the conduct of any person in the government service." Past history has abundantly shown the value and necessity of such special investigation, and the department heads upon whom rests the duty of regular and normal inspection would be the first to recognize the importance of these special investigations and to admit that cases frequently arise which can be handled only in that way and for which routine departmental investigation does not offer a sufficient remedy. Indeed the further we proceed in cultivating autonomy in the departments and imposing upon their heads responsibility of supervision in their own departments, the more important it is that the Governor General should be possessed of the necessary machinery, like his eyes and ears, to keep him informed how that autonomous development is working. The more freedom he allows to his department heads in making their daily decisions, the more necessary is it for him to be able to inform himself when occasion arises how that trust has been carried out. Otherwise, his responsibility of "supervision and control" under the Jones law might be entirely defeated by ignorance of the actual workings of the government. There is nothing in the propositions to appoint these two classes of assistants to the Governor General which is at all unusual. Such technical advice is being sought by all progressive governments and such special investigations are provided for in the laws of most of our American States, including, as I happen to know, my own State of New York.

It is my purpose, if granted the means by the passage of the Kiess bill, to devote a portion of it to the employment of the most competent and trustworthy men for the making of such investigations. No other consideration than fitness would enter into those appointments. It would be my aim to employ for that purpose both Filipinos and Americans wherever men of the requisite fidelity and intelligence can be secured.

Now, the reason of having this provision made by the Congress of the United States in the form of an amendment to the Jones Act and not by the Philippine Legislature is simply this: All of these appointments, as I have pointed out,

must be made upon the basis of merit and fitness alone; politics must not enter into their selection. They must be solely responsible to the Governor General, because they are acting as his eyes and ears in performing one of his most sacred duties imposed upon him by the Jones law. Provision can not be made for such appointments by the Philippine Legislature unless they are either subject to confirmation by the Philippine Senate or appointed by the Secretary of War, in Washington, as was provided by the recent appropriation vetoed by Governor Gilmore. Neither of these methods would meet with entire satisfaction the requisites of these appointments. Confirmation by the senate would inevitably introduce political considerations. Appointment by the Secretary of War, in Washington, even under the best of circumstances and the most cordial cooperation between the Secretary of War and the Governor General, would diminish the personal responsibility of the Governor General and might tend to introduce foreign considerations to appointments which should be made solely with reference to the need here in the islands. Therefore, while I shall not reject any assistance which might be offered me by the insular legislature and shall regard their willingness to make such appropriation as a fine gesture of good will, in my opinion it would not be as effective for the purpose which I believe we all unite in desiring as if it were made by an amendment to the organic law by the Congress of the United States. It has been my hope that consideration of these facts and circumstances, which seem to me to govern the situation, will gradually lead those who have feared or opposed the new Kiess bill (which, by the way, is an entirely different, and, in my opinion, much more favorable bill to the islands than the old Kiess bill) to withdraw their opposition and assist in the working out of a common purpose which has for its object solely the benefit of the islands and the development of an efficient and autonomous government.

APPENDIX C

MEMORANDUM

MANILA, August 8, 1928.

I have heretofore requested the passage of the so-called Kiess bill by the Congress of the United States not from any lack of confidence in the people of the Philippines or their representatives, but because I felt that the Government of the United States, having by the organic act imposed the task of supervision of Philippine administration upon the Governor General, was in duty bound to furnish him with the necessary means to fulfill that weighty responsibility. Otherwise, the Governor General might be left in the position of being responsible for the performance of a vital duty which it was impossible for him to carry out. This duty was created by Congress; it is imposed upon the Governor General by the appointment of the President; and it, therefore, would naturally devolve upon Congress to provide for its proper fulfillment.

The Philippine Legislature has now, in advance of action by Congress, in the so-called Belo bill, proposed to provide the means for this purpose, and it has done so in a way to insure the permanence and nonpartisan character of the provision quite as effectively as if it had been furnished by congressional action.

I am very happy to accept, in the spirit in which it is tendered, this generous action and gesture of good will and cooperation of the Philippine Legislature. In the last instance, good government depends even more upon the spirit which pervades it than upon its form, and I regard this action as a most encouraging augury for the future. I also feel that, inasmuch as I have been active in urging upon Congress the passage of this legislation, it is proper and appropriate that I should now, on signing this bill, state what I conceive to be the purpose for which the provision has been sponsored in Congress by the administration and the character of the duties which are proposed to be performed under it.

The evident purpose of the statute is to provide for the employment of men whose duties will not be administrative in character but will be limited to giving advice upon technical matters or assisting the Governor General in those informative and supervisory functions to accomplish which he is now without any adequate means. Administration is placed by law in other hands, namely, in the heads of the six executive departments and their subordinates. To attempt to form a supercabinet of administrators with this appropriation, in my opinion, would be not only contrary to public opinion both in the United

States and in these islands, but clearly illegal. It is inconceivable that it would be attempted.

The true purpose of the statute is just the opposite, namely, to develop the autonomy of the heads of the departments by placing the Governor General in a position where he can safely intrust ever widening powers of discretion to those department heads with the assurance that he will, nevertheless, be kept in touch with the progress of government and so provided with the information necessary for his action, under the organic law, in cases of dereliction or neglect of duty on their part. Not only the organic law but the administrative code already imposes upon the Governor General the duty of keeping thus informed by investigation and inspection. Hitherto, however, it has been necessary for him either to borrow inspectors from the military and other branches of the Federal Government or to forestall the need of inspection by keeping his own hand closely upon administration, thus frustrating the development of autonomy.

With the aid of this provision I look forward to the flexible development of a proper and balanced system of government under which, as experience in administration grows, a constantly increasing measure of departmental autonomy can be encouraged without running the risk of the serious setbacks which might occur if the duty of supervision imposed upon the Governor General by the organic law was not adequately performed. I regard the measure as one of the most important forward steps which have been taken in the development of responsible government in the Philippines.

HENRY L. STIMSON,
Governor General.

APPENDIX D

The Governor General, after conference with the leaders of the majority of both houses of the legislature, has issued the following executive order:

MANILA, August 30, 1928.

A council of state is hereby created to advise the Governor General on such matters of public policy as he may from time to time lay before it. He shall be the presiding officer of such council of state, and it shall consist of such persons as from time to time may be appointed and summoned by him. Until otherwise ordered by him, it shall consist of the president of the senate, the speaker of the house of representatives, the majority floor leader of the senate, the majority floor leader of the house of representatives, and the heads of the six executive departments.

HENRY L. STIMSON,
Governor General.

This executive order is the last of four steps taken this summer to accomplish regular and responsible cooperation between the executive and legislative branches of the Philippine Government; all of the four steps being part of the same deliberate program. The first was the Belo bill giving to the Governor General the much needed means for exercising his duty of supervision and control over the executive branch of the government, and as heretofore stated, enabling him to permit the development of discretion and autonomy in the departments and bureaus, without himself losing the command of the situation in case of emergency or dereliction which the organic law expects him to have.

The second was the nomination of a cabinet whose members were chosen after conference with the leaders of the majority in the legislature and which is thus expected to be in harmony with that majority.

The third was the amendment to the rules of procedure of both houses of the legislature giving to members of the cabinet the privilege of the floor of both houses, with the right to speak on subjects relating to their departments and the duty, under proper safeguards, of submitting to interrogation thereon.

The fourth, the council of state, creates a body which the Governor General can regularly consult as to such matters of public policy as he chooses to lay before it, in order to obtain advice and guidance for his subsequent action. It is purely an advisory body, and the results of its deliberations are not binding either upon the Governor General or upon the legislature. It is for conference merely. It will possess none of the powers which certain subsequent statutes attempted to impose upon the former council of state of taking binding action

by the vote of its members. It will thus afford no opportunity for one branch of the government to entrench upon or usurp the functions of the other.

It is hoped that those four steps will carry forward and systematize the task of securing cooperation between the executive and legislative branches of the Philippine Government. This task under the organic law is peculiarly difficult as well as extremely important. The Governor General is appointed by and is responsible to the President and the Senate of the United States, while the legislature is elected by the suffrage of the Filipino people, the two branches being thus responsible to entirely different constituencies representing widely separated places and peoples. For these reasons, unlike the situation in the States of the American Union, cooperation between the Governor General and the legislature can not be secured through the influence and control of a common political party.

This divergence of origin, however, is not an accident or a fault. The Governor General is the chief remaining instrumentality by which the United States is now carrying forward its 30-year old policy of developing self-government in the Philippines, and his powers, including the choice and supervision of the heads of the executive departments and bureaus, represent a deliberate and essential part of that American policy. On the other hand, unless he and his appointees work in regular and close cooperation with the representatives of the people in the legislature, it is useless to expect either intelligent legislation based on executive experience or responsible administration faithfully intended to carry out the laws duly enacted by the representatives of the Filipino people.

With the aid of these four steps to aid such cooperation, it is hoped that a system of mutual action will gradually be established which will not subordinate either branch of the government to the other, but, on the contrary, will facilitate the necessary cooperation in their action and will materially assist in the development of an efficient administration in these islands which will become more and more responsive to the deliberately expressed policies of a self-governing electorate.

APPENDIX E

INAUGURAL ADDRESS OF GOVERNOR GENERAL STIMSON

[Delivered on the New Luneta upon his arrival in the Philippine Islands on the morning of March 1, 1928]

FELLOW COUNTRYMEN: I thank you for the warmth of your greeting. Previous contact with the people of these islands has acquainted me with their kindness to the stranger, and I welcome it now as a hopeful augury of success in the difficult task before me. What we have to accomplish together in the successful administration of government in these islands can only be achieved by the fullest possible measure of sympathetic and patient cooperation. For my own part, I shall use my utmost endeavor to establish such harmonious cooperation under the organic law under which it is our joint duty to labor.

It is not within the province of the Governor General to determine the future relations of the inhabitants of these islands to the United States; that duty rests with the Government of the United States. But it is his duty, so long as the present connection remains, to endeavor to make that union a happy and fruitful one, and to carry on the government of these islands, so far as it rests in his hands, in full conformity with the noble and unselfish purpose of the American leaders who in past years have devised, created, and administered it.

It has been my good fortune during my life to come into close contact with several of these men. I have sustained both personal and official relations with that statesman who, as Secretary of War, first laid the broad and enduring foundations of American policy in the Philippines upon which all subsequent growth has been predicated, Elihu Root; with that devoted founder of your civil government and laws, William Howard Taft; with that efficient administrator, so justly beloved through the archipelago, W. Cameron Forbes; and finally with that faithful friend of the Filipino people whose recent labors have made possible, we believe, a new era of constructive accomplishment, Leonard Wood. These great men, each in his own time and way, have helped to formulate the doctrine of trust responsibility which underlies the sovereignty of America in these islands and places upon the shoulders of the Governor Gen-

eral a duty of protection toward the liberties of the humblest citizen. No one can approach such a task, in the light of such examples, in any other than a spirit of profound humility.

For many years I have earnestly followed and observed the development of government in the Philippines and have noted with gratification the progress which has been made. During the past two years, I have had occasion to visit and study other peoples both in the Orient and in the Americas, and I congratulate you on the contrast between the peace, the order, the general contentment prevailing here, and conditions which I observed in some of these countries.

I congratulate you especially upon the zeal which you have consistently displayed toward education and the progress which has been made through that instrumentality in the direction of achieving national consciousness and a common language. In so doing you have grasped at one of the basic necessities of a self-governing people, and the vigor and readiness to make sacrifices which have accompanied your efforts have been in a high degree remarkable and encouraging. Errors in the methods and character of education have possibly been committed; by too many students it has been regarded as the object and end of their endeavor, instead of merely the means toward further effort in the never-ending struggle of life. Yet when all is said, in following the injunction of Solomon to take fast hold of instruction, you have taken a long step forward on what President Roosevelt has called "the stony and difficult path which leads to self-government."

I venture to hope that during my administration further progress may be made along that same road, and among the various matters which I deem important, I lay particular stress upon industrial and economic progress. It has often seemed to me that sometimes in our insistence upon political development we overlook the importance of the economic foundations which must underlie it and upon which it necessarily rests. By some of us, industrial development has even been dreaded as if it were inconsistent with the liberties of a people. As a general proposition, I believe that no greater error could be made. History shows that it has been the great commercial and industrial nations which have first developed individual liberty and free institutions and which have most tenaciously clung to them. It has shown further that within such countries it has been the middle artisan class, produced by industry and commerce, which has been the pillar and support of their free institutions. The industrial guild, in ancient times, was a birthplace of common rights, and in later days the trade union brought forth by industrial development has often been a bulwark against governmental oppression. On the other hand, those nations which have depended solely upon agriculture and the tillage of the soil, where there was no commerce or industry and no middle class of citizens engaged in them, have been the ones most prone to drift into the abuses of serfdom and peonage and other varying forms of servitude. If there is danger to-day of the loss of personal freedom in these islands; if, for example, the threat of the usurer overhangs any class of your citizens, it is the tillers of your rice paddies who are subject to the danger rather than the artisans of your shops and factories.

Furthermore, the world has now reached a stage of progress where government is expected to engage in activities for the social benefit or protection of the individual, all of which are expensive and require greater governmental revenues. The constantly expanding system of public education to which I have just alluded is but a single example. The government of to-day is expected to furnish not only schools and colleges, but also hospitals, asylums, libraries and museums, public roads, aqueducts and post offices, and a constantly increasing variety of services of health and education, travel and communication, protection and social welfare which modern civilized life regards as essential. All of these services minister to the comfort and welfare of the individual citizens; some of them, like education, directly conduce to his ability to govern himself. Some of them are particularly necessary in the Tropics with its constant threat of epidemic disease. But they all cost money. They all make inroads on the revenues which come from taxation. To support them a community must possess the wealth which comes only with industrial development. To-day your budget and your tax laws indicate that you are already reaching the limit of the revenues obtainable upon your present economic development. You are faced with the alternative of increasing your taxable wealth or checking and holding back some of the necessary activities of your government and important public improvements.

In short, it is the simple truth not only that individual freedom and the practice of self-government are found to be most prevalent and firmly held in those communities and nations which have a highly developed system of industry and commerce as a foundation, but it is also true that only in such communities and nations can the average citizen attain the degree of individual comfort, education, and culture which modern civilization is coming to demand.

Is there any reason why the Filipino people should not attain such an economic development? Manifestly it lacks it to-day. Manifestly its attention during the past generation has been more concentrated upon political than economic development, with the result that progress in the latter field has not kept pace with the exceptional progress made in education and public affairs.

But the Philippine Islands to-day are possessed of a political connection with the foremost industrial nation in the world—the nation where not only has mechanical invention made the greatest advances, but where the organization and methods of industry and the relations of capital and labor are more enlightened and fruitful than in any other country under the sun. Is it not the part of wisdom and of prudence for this people to absorb to the uttermost the lessons and benefits which can be derived from the teaching of such a successful practitioner?

Have not the people of the United States sufficiently demonstrated the selfishness of their attitude toward these islands in the matter of political development to make them worthy of confidence in the matter of economic development? I believe that nowhere in the world are the relations of capital to the public watched with a more jealous eye than to-day in the United States. The abuses of capital which excited criticism a generation ago have been curbed. The American captains of industry of to-day have a very different standard of duty toward the public from their predecessors of the nineteenth century. It should be an easy matter for wise statesmanship to gain for these islands the inestimable benefit of the guidance of American industrial experience and capital, upon terms which would not only share present profits with the Filipino people but would also leave their rights and resources unimpaired for the generations to come.

Moreover, I believe that the establishment of such industrial relations with the United States would greatly benefit the social relations of the two peoples. Business relations between worthy partners tend to produce mutual confidence. On a small scale I witnessed a striking example of this tendency when I visited Hawaii on my journey hither. The Filipino laborers who go from here to the Hawaiian sugar plantations occupy a very different position in that community to-day than they did 10 years ago. They have won their place in the confidence of those with whom they come in contact. They have become almost indispensable to the industry of those islands, while at the same time they have themselves derived corresponding benefit in training, in responsibility, and in earning power. As I listened to the generous praise spoken of them by their employers in Hawaii, I could not help feeling that if such a change of sentiment could be effected by the mere contact of a few laborers engaged in field labor, what an enormous social benefit could be derived should the Filipino people in large numbers and of all classes, laborers, artisans, and investors, be brought into friendly, profitable, and cooperating contact with the representative business men of industrial America.

Three centuries ago, under the leadership of Spain, you turned your faces from the Orient toward the Western World. You accepted a civilization and a religion which marked you as a separate people from those who surround you. Now with the passage of those three centuries, your connection with the West has itself become transformed into a promise of new opportunities. The nation with which you are now connected represents not only political freedom but the highest average standard of social and material welfare which has yet been developed in this world.

I can not believe that this opportunity will not be grasped by the Filipino people. On the contrary, I believe that it will, and through it that they will press forward into new stages of political freedom, individual comfort, and social welfare.

I have addressed myself thus far to the Filipino people, because the steps necessary for the solution of the problem which I have been discussing must primarily be taken by them. Before closing, may I add a word of appreciation and good wishes to the American residents of these islands. I am keenly sensible of the debt of gratitude which both the Filipino people and the people of the United States owe to them and of the duty which rests upon the shoulders

of the Governor General to protect their legitimate rights and interests. Whether in the military uniform of the United States, whether as civil servants and teachers of this government, or whether as business men risking their all in the development of its resources, these Americans have rendered inestimable service to this land. They have been the pioneers in the performance of an American service to an oriental people, such as no other nation of the world has even attempted. It would be a shortsighted policy indeed which allowed them to be treated either with neglect or injustice, for such a policy could result only in ultimate injury to this country where their service was rendered.

In the conduct of this office into which I have now been inducted, it will be my earnest endeavor to be watchful of the interests of both Americans and Filipinos alike, to be equally accessible to all and patient in hearing all sides of such issues as may arise.

Working all of us together in a spirit of sympathetic cooperation, I trust that under the providence of God, we may be successful in carrying forward the high aims and purposes of the noble men who have preceded us.

MANILA, *March 1, 1928.*

APPENDIX F

MESSAGE OF THE GOVERNOR GENERAL TO THE EIGHTH PHILIPPINE LEGISLATURE

[Delivered by his excellency in the hall of the house of representatives on July 16, 1928]

GENTLEMEN OF THE LEGISLATURE: It is my privilege and pleasure to extend to you a cordial welcome to Manila. My first duty is the pleasant one of expressing my desire and hope that we shall have the most sympathetic mutual cooperation in the common task of government which is imposed upon us and of making to your honorable body, on behalf of myself and the other members of the executive branch of the government, a sincere tender of such cooperation. The fact that the legislature and the Governor General approach each other for this cooperation, from two different sources of appointment and from different constituencies situated in widely separate lands, is due to no faulty accident of our organic law. On the contrary, it is merely indicative of the true character and complexity of the problem which these two branches of our government must execute in cooperation with each other; namely, the problem of achieving here in the Orient on the part of the Filipino people, with the friendly assistance of occidental America, a new political, industrial, and social civilization of a kind different from any of the governments or civilizations to which the Filipinos have been accustomed in the past.

The year that has passed since the opening of the last legislative session has been an unusually quiet and prosperous one to the great body of the Filipino people. Generally speaking, public order has been excellent and health conditions good with a notable freedom from epidemic diseases. No floods, typhoons, or similar natural disasters, have reached the magnitude of those frequently experienced in previous years. The country has passed through a general election with most commendable freedom from disorder, although the department in charge of the supervision of that election has reported to me a growing and dangerous increase in the corrupt use of money at the polls.

The general condition of the country is reasonably prosperous, and the financial condition of the government at the close of the fiscal year was very good. Thanks to the efforts of preceding administrations, aided by previous legislatures, the currency is now amply secured and the payment of the bonded indebtedness at its maturity is provided for by adequate sinking funds. In 1927 the revenues exceeded the expenditures of government by over ₱3,000,000, and the balance sheet of the government shows a surplus over all commitments of about ₱7,000,000. It must not be forgotten, however, that while the ordinary expenses of government increased last year by about ₱5,000,000, and will necessarily continue to increase hereafter with the growth of population and of governmental activities in the islands, the revenues for some years have been substantially stationary and the surplus in the treasury has, therefore, decreased and is necessarily decreasing.

The provincial and municipal governments report an increase in the assessed value of property and an improvement in the collection of taxes. The total trade of the islands showed in 1927 an increase of over ₱30,000,000 over 1926. The area planted to most of our leading crops was larger than ever before recorded, the increase in the production of rice being particularly encouraging.

ECONOMIC DEVELOPMENT

In my inaugural address I attempted to point out the importance of a greater economic development of these islands and the necessity of encouraging the entry of American capital for that purpose. I believe that problem is the fundamental problem of the Philippine Islands to-day, underlying nearly all other problems, and it is the subject to which I now wish to direct the principal attention of your honorable body.

Many years ago the Filipino people turned their faces from the Orient toward the West and accepted a western civilization. With the progress of time their tastes have become more firmly set upon the ideals of the Occident. Not only in their material surroundings are they grasping after and becoming dependent upon the comforts and advantages peculiar to a western civilization but in their political ideals and in their education they are vigorously cultivating a mental aptitude and desire for such advantages. The improved roads and motorbuses which transport your people from Province to Province with an ease and rapidity undreamed of a few years ago are no more significant of this change than are the political and educational activities, the elections, the schools and universities, the libraries and museums, and the other centers of government, education, recreation, and culture which are scattered throughout your land to-day. The Filipino people to-day constitute a community in the Orient filled with eager western desire and hunger for the mental and material good things of this life, but are held back from a gratification of this desire by their failure thus far to achieve the mechanical and economic progress by which alone such desires can be gratified.

At the same time, the Philippine Islands contain a wealth of natural resources which, under proper development, could be made to satisfy these unfilled desires of their people. These great resources have been left virtually untouched. In spite of this demand for material comforts it is pointed out by experts that the great masses of our population are to-day undernourished from lack of a proper food supply and suffer greatly from diseases arising from lack of nutrition, like tuberculosis and beriberi; that they are scourged by other diseases, epidemic and otherwise, arising from preventable causes; and that all of this could be controlled or eliminated by a wise expenditure of money if their government only had that money to expend.

We find a similar situation in respect to the functions of government which touch the social, political, and intellectual activities of the people. The present wealth of the islands will not support the taxation necessary to support such activities. Every man in this room is familiar with needed undertakings in his Province, such as the construction of necessary roads and bridges, the establishment of better hospitals, public buildings and schools, additional courses of education, and other activities of a highly beneficial character to his constituents, which can not be undertaken owing to the limitations of the budget.

What is the cause of this singular anomaly? Why is it that a people who have shown such remarkable interest in and adaptability for the advantages of modern civilization, and have exhibited so much intelligence, self-sacrifice and zeal in their pursuit, and who at the same time are the heirs of such wonderful natural resources, should be held up and turned back at the very entrance to the Promised Land, like a thirsty Tantalus at the vision of his springs of living water?

Recently I had the good fortune to secure for the use of this government a critical investigation and survey of the economic conditions of these islands by a competent and experienced authority. On my request, Mr. Lyman P. Hammond, the vice president of one of the foremost electric utility systems of the United States, spent nearly three months here visiting every portion of the islands and bringing to bear upon the problem the intelligence of a highly trained mind familiar with the recent growth of progressive industry in both North and South America. His observations have been presented to me in a report which is now printed and available for your use. In substance, he finds that this singular condition of the Filipino people, this dis-

parity between the ideals and tastes which they have cultivated and their present power to satisfy those tastes, arises directly out of their failure to make use of the service and power of modern machinery and modern mechanical methods. He further points out that this service can only be obtained by that kind of cooperation which is known as modern large business and by the use of large quantities of capital properly organized and intelligently applied according to modern standards.

In summing up his carefully recorded observations, he says:

"The comparison of the economic situation in the Philippines with that in the United States is a comparison of hand labor and small productive units versus the machine and large productive units. It is as the comparison between the modern sugar central consuming hundreds of tons of cane daily and recovering 92 per cent of the sugar, and the slow, laborious carabao mill, the daily capacity of which is better expressed in kilos than in tons and where something like 40 per cent of the sugar in the cane is lost or wasted in the milling process. The imperative need of Philippine industry that I see is the large unit, the machinery and equipment that can only be worked in large units, and the capital to provide that machinery and equipment. Things must be done on a larger scale here if the Philippines are to expand in the face of world competition. * * *

"The iron ore deposits of Sur gao and Calambayanga can not be worked by the spade; the steam shovel is necessary. The deeply buried gold bearing strata in the Mountain Province can not be located with the prospector's pick; the diamond drill or extension of the deep workings of the mines will be required for the discovery. The coal deposits will come into profitable operation when power-consuming industries come in size and number to justify mining operations on a large enough scale with modern mining and conveying equipment. Domestic manufacturers will come with improvement in the scale of living and increase in the purchasing power of the people. Philippine manufacture for foreign markets will come only as the machine replaces the hand no matter how cheap the labor.

"In my opinion, Philippine development now calls for operation in and by big business units. What is needed here is the corporation with ample resources in capital and technical and expert talent."

Agriculture is to-day, and long will be, the chief industry of the people of the Philippines. Mr. Hammond's report drives home the fact, which is patent to every thoughtful observer, that even in agriculture, under modern conditions of production and marketing, the Philippine farmer is dependent upon capital in large units for the disposal of his crop. The Philippines are so far distant from their natural markets that most of their agricultural products can not be transported without local fabrication and reduction in bulk. The small sugar planter can only profitably harvest his crop if capital has planted an expensive central within reach of his holdings, while the growers of coconuts, pineapples, rubber, and many other crops, require similar assistance.

In other words, unless the Filipino farmers are willing to remain in their present unsatisfactory condition, which in many parts of the islands gives them so narrow a margin of living as to leave them in constant economic serfdom to the neighboring money lender or the monopolistic shipowner who controls transportation to their markets, these islands must have the benefit of modern machinery, modern capital, and modern methods to establish among them the necessary agencies by which the standards of agriculture can be improved and the fruits of agriculture marketed. The small producer alone is an easy victim of oppression from middlemen and transportation agent alike. Unsupported he can never get far enough ahead to win for the Philippines their proper place in the markets of the world. To accomplish that development, he and his fellows must assemble themselves in large groups about common centers—sugar centrals, canning factories, coconut mills, or drying plants—with which they are united by the terms of equitable contract under which the production of the individual farmer is stimulated and assisted, and the marketing of his produce insured. Such cooperation is the rule of the world to-day, and the nation which fails to follow it is doomed to fail in the race. But the basis of such cooperation can only be furnished by the introduction of large amounts of capital.

Again, electricity is the chief handmaiden of modern civilization. It furnishes communication, light, power, and—a matter of fundamental importance to the Tropics—refrigeration. The development of all these applications of electricity in the Philippines to-day is rudimentary. Whereas in the United

States there is a telephone for every 7 inhabitants, there is here only 1 for every 690. Whereas in the United States we can telephone to every part of that vast country and do business by voice over the wire, in these islands long-distance telephoning is practically unknown. I am informed that only 6 of our cities enjoy 24-hour electric light service. This means that in none of the other cities, towns, or localities of these islands, can electricity be made available for power and refrigeration, or for anything except light. These constitute fatal obstacles to any real economic development of the islands. Such a development depends more than anything else upon quick and easy communication, upon cheap and flexible power, and upon the preservation of food and other products by refrigeration. As one of the first steps toward such development, every effort should be made to encourage American capital to establish here the same cheap and efficient electrical service that has made America preeminent throughout the entire world.

Certain thoughtless critics have sought to arouse suspicion and enmity by saying that to invite the help of such capital would be to institute economic serfdom to America. It would be hard to conceive a more disastrous error. By exciting an unfounded fear, these critics would block the only avenue toward economic, and therefore political, independence for these islands. The Philippine Islands to-day stand in much the same economic situation as the United States stood 150 years ago. We in America were then possessors of the boundless resources of a great continent, but we were poor and lacked the means to develop these resources. We borrowed freely from Europe, including many countries with whose political institutions we had no sympathy and even held in profound distrust. Is America in economic serfdom to these countries to-day? She has developed her resources; she has paid back her debts; and to-day is not only independent of her former creditors, but is able to lend to and support them in their later troubles.

Again, these critics fear lest we shall mortgage the heritage of future Philippine generations. My own attitude on such a proposition should be well known, for, as Secretary of War in America, I was one of the pioneers in the movement for the conservation of our natural resources including particularly water power. No measure calculated to waste or squander such resources will ever knowingly be favored or approved by me. But conservation does not mean the indefinite locking up of resources; it means their wise use for the welfare and happiness of the people. At the present rate with which the agricultural land of these islands is being distributed among their people, it will be 400 years before that great asset, that great guardian of a people's stability, is fully put to use. This is not conservation; this is waste. Idle land does not minister to the welfare of a people; while land wisely distributed and wisely used is a most valuable instrument to lead them into habits of thrift and patriotism and into conditions of comfort and individual independence. There is thus pressing upon us the twofold problem: First, to eliminate the delays in the distribution of our land among the people and to establish upon that land a great home-making and home-loving population holding clear and undisputed titles to their land; and then, secondly, by a wise encouragement of capital, to provide the necessary centrals and other institutions which will insure the prosperity and independence of these small farmers by assisting in the production and marketing of their crops.

While there has been such criticism as I have alluded to and while to excite mutual suspicion and hostility between the Philippines and the United States tends naturally to make capital timid and to discourage it from seeking operations in this neighborhood, yet I do not think that in such causes can we find the principal reason why capital has been lacking and our development backward. On the contrary, compared with some countries in Central and South America where American capital has freely and abundantly entered, the disposition of the Filipino people as a whole is not only politically conservative but friendly and hospitable toward Americans; and, indeed, in the recent election they have given unmistakable evidence of their favorable attitude on this question. I believe that the chief obstacle to our development has lain in certain unwise limitations of law, most of them introduced here a generation ago from the United States under the influence of the theories then prevailing but which have long since been exploded in the land of their origin. Bring these laws up to date; make them conform to the modern laws under which modern American progress has been reached, and I believe that the difficulty will cease. Other tropical countries, including Cuba, Panama, and Hawaii and several in South America, have already revised their corpora-

tion laws with the purpose of inviting foreign capital to assist their development and the result is said to have been most satisfactory.

I believe that American capital has learned the unwisdom and the danger of attempting unfairly to exploit the land in which it enters. I believe that it is ready to come here, and it certainly will be permitted to come here only upon terms of fairness with respect to the treatment of its Filipino partners and its Filipino labor. What capital demands, and what it has a right to expect, is safety of investment and the certainty of fair treatment under the law of the country where the investment is made. The greater that safety and certainty, the more cheaply can capital be obtained. High rates of interest are demanded only where the hazard is great. Capital will not rely upon the chances of favors or discretionary benefits; it demands equality and safety before the law.

I, therefore, recommend that your honorable body institute a thorough revision of your laws governing the creation of corporations and the regulation of their activities, including the control over your public utilities and including a wise and conservative revision of your land laws, as well as of all the laws under which capital comes into contact with government; that these laws be so revised as to bring them up to a parity with the modern legislation of other advanced countries, so as to insure the people who are willing to lend money to you that the enterprise in which they invest will be fairly, justly, and equitably treated by your public officials and that the title of the securities which the investors receive in exchange for their money will be sound and safe.

I have been fortunate indeed to find that prior to my coming to these islands this subject had already begun to receive the attention of an able joint committee of the two bar associations of this city, the American and the Filipino Bar Associations. The names of the members of this committee are such as to guarantee the ability and integrity of their work. I have turned over to them copies of Mr. Hammond's report and all other information on this subject which is in my possession, and I have requested them to give the subject attention and to assist your honorable body with a report as to the changes in your laws which they recommend as advisable to forward this end. Until that report is forthcoming it will be unnecessary for me to go into further detail as to such specific measures.

LONG-DISTANCE ELECTRICAL COMMUNICATION AND INTERISLAND TRANSPORTATION

I wish to call your attention to two subjects intimately connected with this matter of our economic development, in both of which I believe there is great need of improvement and reform. One is the subject of long-distance electrical communication, whether by telegraph, telephone, or radio, and the other is the subject of interisland transportation. Quick and easy communication and quick and easy transportation are the two pillars upon which the development of commerce principally rests. In these islands we have neither. The visitor coming here from abroad and seeking to do business according to the modern methods of communication or transportation feels as if he had stepped into the past. Real economic progress is impossible until these vital subjects receive adequate treatment. To-day both our telegraphs and our shipping are in the hands of artificial monopolies—the former a monopoly enjoyed by the government; the latter monopolies fostered in favored individuals or firms by restrictive legislation. I do not criticize the wisdom of the policy which has sought by this legislation to encourage the development of a Philippine merchant marine in the hands of Filipinos and Americans. But all artificial monopolies such as these must be constantly and carefully watched lest other and broader public interests suffer in consequence. Here, in the case of both these systems, I believe that it is clear that serious evils exist and that to-day Philippine trade and commerce are being injured and the lives and safety of Philippine travelers jeopardized to an extent which much more than offsets the benefits now being derived from these monopolies. Both of these subjects have been called to the attention of previous legislatures by my predecessors. In each of them we have the benefit of careful investigations and reports made by special committees created for that purpose.

Long-distance electrical communication.—I submit for your consideration the report of a special committee which I designated to investigate the subject of the telegraph service rendered by the bureau of posts between the principal business centers of the islands, Manila, Cebu, Iloilo, Davao, and Zam-

boanga. The delays and the irregularities occurring in that service would be unbelievable if they were not familiar to every person having occasion to rely upon it.

I do not criticize individuals but a system, nor am I oblivious of the fact that under our present system of government telegraphs we have obtained telegraphic service to remote points of the islands where a commercial service by private corporations would not yet be self-supporting. But I believe that no economic fact is better established in the world to-day than the fact that, taken by the large, government operation of such electrical utility is far less efficient than private operation thereof. Furthermore, nowhere in the world to-day does there exist a combined telegraph and telephone service of such surpassing efficiency as is furnished by private operation in the United States. I believe that this is the ideal for which we should strive, and that as rapidly as we can find efficient and responsible private companies to take it over, we should place our electrical communications in private hands. To retain such an important service as that between Manila and Cebu and Iloilo in the bureau of posts simply to produce a better governmental balance sheet for that bureau at the cost by so doing of throttling trade and commerce between those important cities, is penny wise and pound foolish.

Interisland transportation.—The people of these islands have learned the importance of improved transportation on land. There is no purpose for which they are more ready to expend their governmental revenues than for modern roads; and the rapid increase in public transportation on those roads within the past two or three years is one of the most striking features of development in the islands. And yet, with their population scattered among hundreds of islands connected with a natural medium of communication furnished by nature itself, the sea, they have been singularly slow in insisting upon adequate and speedy communication by water. This subject received the earnest attention of the Acting Governor General in his message to the final session of the last legislature, and a careful investigation of the subject was made by an advisory committee appointed by him, the report of which committee unfortunately did not reach the legislature until rather late in its session. I earnestly commend the report and recommendations of that committee to your attention.

This committee found that the existing tonnage engaged in interisland shipping is inadequate; that the ships are old, obsolete, unsanitary, ineffectively managed, and not suited to the needs of interisland transportation; that monopolistic conditions exist under the law which prevent free competition and retard the normal improvement of facilities; that numerous abuses and discriminations exist; and that adequate provision is not made for the safety, comfort, and convenience of passengers. In short, they found that a condition exists in regard to transportation on the sea which in adequacy, efficiency, and safety is in shocking contrast to that which exists upon the land.

The seventh legislature enacted certain important remedial legislation, but they left without action many of the recommendations of this committee including the one which that committee had set forth as "the first and most important step to be taken for the permanent improvement of the present unsatisfactory conditions," namely, the repeal of the present law which prevents the foreign companies or firms which are engaged in interisland shipping from replacing with new vessels the antiquated vessels now used by them.

It is difficult to defend a system of law which permits an individual or company to engage in the business of transporting lives and property, but at the same time forbids them to do it with safety or efficiency. I commend to your honorable body this provision of law as one which requires special attention. The entire subject is so important and vital and has been so comprehensively dealt with in the report of this committee that I trust not only the foregoing recommendation but the other recommendations therein will be most carefully considered.

One of the evils pointed out in the report above mentioned on interisland shipping is the restricted terminal facilities for the handling of the cargoes of such shipping in the city of Manila. At present these shipments are handled on the Pasig River, where inadequate wharfage exists and where the trucks delivering and removing freight from the vessels have such restricted approaches on shore that their necessary operation causes great obstruction to the traffic in the adjacent streets.

Plans have been proposed to former legislatures for the development of a new harbor north of the Pasig River which would furnish among other things

ample and modern wharfage facilities for all interisland ships. Without expressing at present any opinion as to the various methods proposed for financing such an improvement, I think the project is one which has a vital and intimate bearing upon the commercial development of the islands and should receive the careful attention of the legislature.

In this address I have necessarily only presented to you certain principal topics which I believe to merit your special attention. There are, of course, many other matters, most of which have been laid before you by my predecessors, which I deem to be important and also worthy of action. I shall, however, not enumerate them to-day but shall bring them to your attention specifically by messages in the near future.

I again wish to assure you that at all times I and the other members of the executive stand ready to assist you in any way which lies within our power, whether it be to assist in the preparation of bills, or in supplying information necessary for legislation, or in giving you our best judgment on proposed bills. I shall always welcome opportunities for conference and shall do everything in my power to secure that necessary cooperation without which wise and well considered legislation can not be obtained.

HENRY L. STIMSON,
Governor General.

ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR

DEPARTMENT OF THE INTERIOR,
Manila, March 15, 1929.

SIR: I have the honor to submit the following report of the department of the interior for the calendar year 1928:

Conditions in general.—During the year under review the affairs of the bureaus and offices under this department and of the Provinces and municipalities were successfully and efficiently handled. In a number of inspection trips to several Provinces and municipalities made by the undersigned, the people have been found to be content, happy, and law-abiding. On the whole, the conduct of our provincial and municipal officials has been exemplary. With their zeal and devotion to duty, revenue collections increased and many needed public improvements, such as roads, bridges, markets, and slaughterhouses, waterworks systems, school buildings, provincial buildings, presidencias, etc., undertaken.

With the exception of a few local disturbances caused by some recalcitrant and fanatical Moros such as the Alangkats in Mindanao and Sulu, the Intrencherado and Pulajan uprisings in the Visayas and other minor disturbances in other Provinces of the archipelago, the condition of peace and order was excellent throughout the year. The Intrencherado and Alangkat uprisings were already touched upon in our last annual report. A summary of their activities for 1928 may be found in the report of the chief of constabulary.

The Pulajanés were members of a society known as "Pulajan" the apparent object of which was looting. The Pulajanés conducted their operations in Capiz, Samar, and Occidental Negros. With the killing of some of the leaders in engagements had with the constabulary and the incarceration of others, the activities of the Pulajanés ceased. Criminal complaints against some of those caught and arrested are still pending in the courts.

Public calamities.—On November 22 and 23, 1928, a destructive typhoon hit several Provinces in the Bicol region and in the Visayas, and caused the loss of several million pesos worth of crops and of public and other private properties. The Provinces which suffered the most from the ravaging effects of this typhoon are Albay, Sorsogon, Samar, Romblon, Camarines Norte, Masbate, Marinduque, Leyte, and Mindoro. Aside from the above-mentioned Provinces, there were others which likewise were hit by the same typhoon although the damage wrought was not so great. These Provinces are Camarines Sur, Tayabas, Nueva Vizcaya, Laguna, Iloilo, Zambales, Isabela, Misamis, and Capiz. Detailed statement of losses caused by this typhoon and the relief measures undertaken is not considered necessary as the office of the Governor General is understood to be in possession of these data, the Governor General having taken active and direct charge of this matter with the cooperation of the Red Cross, the United States Navy and other governmental agencies. It may be mentioned here, however, that at this writing Act 3524 appropriating the sum of ₱1,000,000 for the construction, reconstruction, or repair of public works and improvements in the devastated Provinces has already been enacted by the Philippine Legislature at the special sessions held on February 7, 1929, and approved by the Governor General on February 21, 1929.

On December 19, 1928, a violent and disastrous earthquake was felt in the Province of Cotabato killing 3, slightly injuring more than 100 persons and destroying about ₱600,000 worth of property, consisting mostly of government buildings. According to reports, this earthquake was the strongest ever felt in that Province. Relief work was immediately undertaken and is now in progress. This department has recommended to the secretary of commerce and communi-

cations the granting of an aid to the Province of Cotabato for construction work in accordance with the provisions of Act 3524 mentioned in one of the preceding paragraphs.

On June 20, 1928, the Mayon Volcano, located in the Province of Albay, erupted and remained intermittently active for a period of several weeks. While there were no losses of lives, the eruption having been merely mild, it nevertheless caused considerable consternation among the people living in the municipalities and barrios of Guinobatan, Jovellar, Ligao, Oas, Legaspi, Daraga, Camalig, Libog, Malilipot, Bacacay, and Tabaco, a great many of whom abandoned their homes and fled to places of safety. Precautionary measures to prevent the outbreak of disease or trouble were immediately taken by the government with the cooperation of the Red Cross. A portion of the crops in the towns just named, such as fruit trees, coconuts, and abaca plants were damaged, and little harvest is expected from them within the next two years.

Legislation.—Several legislations affecting the activities of the department of the interior were enacted by the Philippine Legislature and approved by the Governor General during the year. Those considered the most important are the following:

Act 3450: Amending section 2200 of the administrative code, providing for the prompt and final disposition of deadlocks in the confirmation of appointments of municipal officers and employees made by municipal presidents.

Act 3451: Amending section 2296 of the administrative code by modifying the procedure in the preparation of municipal budgets.

Act 3456: Authorizing the city of Manila to issue bonds in the amount of ₱10,000,000 public improvements.

Act 3460: Authorizing appropriations for public works.

Act 3461: Appropriating the sum of ₱10,000 for the reconstruction and improvement of Rizal Park in the municipality of Dapitan, Zamboanga.

Act 3463: Amending section 383 of the administrative code, providing for cash refund of realty taxes paid in excess of the proper assessment.

Act 3466: Amending sections 2431 and 2432 of Act 2711 by extending the territorial limits of the city of Manila.

Act 3471: Authorizing the Province of Cebu to issue bonds for the purpose of raising funds for the construction of a Provincial capitol building.

Act 3476: Amending sections 2076 and 2098 of the administrative code, by eliminating provincial treasurers and secretaries of provincial boards from the list of officials who may be designated acting provincial governors in case of the temporary absence of the regular incumbents.

Act 3481: Authorizing the Province of Leyte to issue bonds, for the purpose of raising funds for the construction of permanent improvements.

Act 3483: Appropriating the sum of ₱24,000 for the purchase or expropriation of the place where Dr. Jose Rizal was born.

Act 3496: Amending Act No. 2605 and providing for the reorganization of the academy for officers of the Philippine Constabulary.

Act 3497: Organizing the municipality of San Juan in the Province of Abra.

Act 3498: Organizing the municipalities of Mansalay and San Teodoro in the Province of Mindoro.

Act 3500: Creating a revolving fund of ₱5,000,000 for the construction of permanent bridges.

Act 3501: Amending section 453 of the administrative code, as amended by Act 3387, by allowing illiterate or disabled voters to designate a candidate to assist them in the preparation of their ballots.

In addition to the foregoing, several electric franchises were granted to private parties by the legislature for certain municipalities in the Province of Ilocos Norte, Occidental Negros, Bataan, Antique, Cavite, Cebu, Isabela, Bulacan, Pangasinan, Capiz, Bohol, and Iloilo.

The following is a brief review of the most important activities and outstanding accomplishments of the bureaus and offices under the jurisdiction of this department:

EXECUTIVE BUREAU

It was through this bureau that this department exercised its supervision over the administration of the provincial and municipal governments in the entire Archipelago, excepting those under the jurisdiction of the bureau of non-Christian tribes which are treated separately in this report. The bureau and the Provinces and municipalities under its jurisdiction handled their affairs

in an efficient manner. On the whole, the local officials have conducted themselves well and have thus justified the adoption of the policy of the central government in granting more and more autonomous powers to our local governments. Revenue collections from all sources, the most important of which are the real and cedula taxes, these being the basic sources of revenue of our Provinces and municipalities, have increased. With the increased revenue collected, the proceeds of loans secured, the insular aid given by the central government and the proceeds of bond issues, many needed public improvements have been constructed during the year. The most important of the public improvements undertaken are markets and slaughterhouses and water-works systems, which are revenue-producing projects; schoolhouses, presidencia buildings, hospitals, provincial capitol buildings, municipal and interprovincial roads and bridges.

In view of the fact that the report of the executive bureau has to be based on information from the different Provinces and municipalities of the Philippine Islands, it has not been possible for that bureau to submit its final report yet. The same is now in process of preparation and will be submitted as soon as the reports from the Provinces and municipalities are received. This department has already submitted to that office advanced statistical information on administrative cases against local officials. Additional statistical information on revenue collections is herewith submitted.

BUREAU OF NONCHRISTIAN TRIBES

Public order.—Much credit is due the provincial and municipal officials as a whole for their part in the preservation of law and the maintenance of public order in their respective jurisdictions. They carried out faithfully the policies of the government in relation to the attraction of the less advanced portions of the population toward organized community life and the pursuit of peaceful and profitable occupations, principally along the line of agriculture. The provincial governors have spared no effort in bringing under the control and influence of the government such of the people in their respective Provinces as were still inclined to lawlessness and nomadic existence.

Conduct of provincial and municipal officials.—In general, the provincial and municipal officials of the nine Provinces under the jurisdiction of this bureau conducted themselves properly and performed their duties well and efficiently. Only two administrative investigations for irregularities against local officials, as compared with nine in 1927, were made during the year. One was against the provincial treasurer of Cotabato and his chief clerk for alleged indulgence in gambling, and the other, against the provincial treasurer of Lanao, for certain immoral acts and irregularities alleged to have been committed by him while he was provincial secretary-treasurer of Bukidnon. These cases were pending decision at the close of the year.

Revenue collections and assessments.—The principal local sources of revenues in the nine Provinces under the bureau of non-Christian tribes are the cedula tax and the land tax. The following are the comparative figures on the amounts collected:

	1926	1927	1928
Cedula.....	P443, 106. 00	P475, 199. 00	P508, 038. 00
Land tax.....	712, 236. 00	751, 043. 94	808, 265. 99

The revision and extension of assessment during 1928 brought about considerable increase in the valuation of real property in these nine Provinces. Below are comparative figures:

Valuations

	1926	1927	1928
Taxable.....	P74, 612, 966. 89	P78, 217, 470. 00	P84, 013, 866. 00
Exempt.....	8, 279, 188. 00	8, 553, 400. 00	8, 589, 944. 00
Total.....	82, 892, 154. 89	86, 770, 930. 00	92, 603, 810. 00

Parcels

	Taxable	Exempt	Total
1927.....	236,071	263,132	499,203
1928.....	63,212	64,511	127,723

The increase in cedula collections indicates peaceful conditions during the year and growing understanding of the people of the necessity of supporting the government, while the increase in real property valuations and in land tax shows a gratifying advance along the line of economic development.

Insular aid.—There was no fundamental difference as to the giving of insular aid to the Provinces under the jurisdiction of the bureau between the year 1928 and previous years. Seven of them continued receiving the amounts necessary as additions to local revenues for the financing of the provincial government administration. To Zamboanga and Davao, small amounts only were allotted for public improvements, these two Provinces being financially self-sufficient with respect to current administration expenses. Of the total appropriation for this bureau during 1928, slightly over 65 per cent is for aid purposes, the amount in figures being ₱415,000, of which ₱50,000 was to be used in the regularly organized Provinces where there are non-Christian inhabitants. For the last three years, the bureau distributed the following amounts for aid purposes:

Year	General administration	Particular projects	Total
1926.....	₱302,200	₱97,800	₱400,000
1927.....	309,300	55,700	365,000
1928.....	327,742	37,250	365,000

Another important item in the appropriation for this bureau is the ₱90,000 "for establishing and promoting friendly relations with the non-Christian inhabitants of the Philippine Islands and for furthering their agricultural, industrial, and social development and their progress in civilization, including intermigration expenses and the traveling expenses of a non-Christian commission to visit the Provinces of Luzon and Visayas." Nearly 66½ per cent of this amount was used to supplement the ₱365,000 insular aid item and given to the different Provinces for the construction and maintenance of means of communications, for sanitation, and for various purposes having in view the economic and industrial development of the non-Christian communities.

Non-Christian in the regular Provinces.—The bureau extended its activities in 1928 to 17 regularly organized Provinces where there are non-Christian inhabitants, namely, Abra, Bataan, Camarines Sur, Capiz, Isabela, Ilocos Sur, Ilocos Norte, Mindoro, Misamis, Occidental Negros, Oriental Negros, Pangasinana, Rizal, Surigao, Tarlac, Tayabas, and Zambales. Continued special attention was given to the work of getting non-Christians together to live in organized settlements and to engage themselves in useful occupations.

Special scholarships.—For the school year 1928–29, there were 35 scholarships awarded to non-Christians. Most of the students granted these scholarships attended schools giving courses in agriculture and education. About the latter part of the year, the two Mohammedan special cadets of the bureau of non-Christian tribes at the constabulary academy in Baguio completed their course. One stood No. 3 among the highest, while the other was among the next 10 highest. It will be remembered that the system of awarding scholarships to non-Christians was adopted as a part of the program of preparing non-Christian young men and women for participation in the affairs of government in their localities.

Employment of non-Christians.—The number of non-Christians employed in the government service in the nine Provinces under the jurisdiction of the bureau of non-Christian tribes was greatly increased during the year. There were 2,053 non-Christians employed in 1928 as compared with 1,674 in 1927.

In making appointments, appointing officials consistently gave first consideration to non-Christians possessing qualifications for public service.

Non-Christian delegations.—Dayang-Dayang Hadji Piandao, the Princess of Sulu, and attendants, came to Manila in April, 1928, as guests of the government. She came to discuss official matters affecting Sulu. Other non-Christian people, mostly from Lanao and Sulu, came to Manila also at different times during the year and were given the assistance they asked for in connection with business matters that brought them to the city.

Appropriations and expenditures.—The bureau had the same appropriation for 1928 as that for the previous year, with the exception of the reduction made in the amount for the allowance of the sultan of Sulu and counselors because of the death of one of the grantees. The total 1928 appropriation was ₱637,844. Only 12½ per cent of this was for the expenses of the office proper, the rest being for cash contributions and gratuities. The ₱20,000 appropriated during 1927 under act 3368 for the acquisition and construction of a public park in Jolo was considered by the bureau of audits as an appropriation properly pertaining to the bureau of non-Christian tribes. This amount was not included in the figures we reported during 1927. Not having been used during 1927, it was continued as an appropriation of the bureau of non-Christian tribes for 1928. A comparative statement of the total sums appropriated for, and the expenditures by, the bureau during the last three years follows:

Year	Appropriation	Expenditures	Savings
1926.....	₱590,644.00	₱582,242.88	₱8,401.12
1927.....	619,123.11	611,413.34	7,709.77
1928.....	637,844.00	633,287.66	4,556.34

The foregoing report for the bureau of non-Christian tribes is based on a preliminary report submitted by the director of this bureau. The figures given are subject to correction, but we are informed that they are more or less accurate as now submitted. Advanced statistical information concerning the activities of this bureau has already been forwarded to that office.

PHILIPPINE CONSTABULARY

In general.—The Philippine Constabulary under the command of Brig. Gen. C. E. Nathorst, was kept busy throughout the year. It operated against recalcitrant Moros in Mindanao and Sulu, the Intrencherado and Pulajan uprisings in the Visayas, and was, in addition, on quarantine duty in northern Luzon and the Province of Antique.

Strength.—The actual strength of the constabulary on December 31, 1928, was 398 officers and 6,114 enlisted men as compared with 394 officers and 6,132 enlisted men in 1927. Of the 398 officers, 370 were Filipinos and 28 were Americans. During the year 4 officers retired, 13 other officers resigned, and 23 new officers were appointed.

Discipline.—That the efficiency and high standard of discipline in the constabulary might be maintained it was found necessary to dismiss 1 officer from the service, force the resignation of 7 officers, reduce in files 6 officers, fine 16 others, and reprimand 11 other officers in orders issued by the chief of constabulary. There were 921 enlisted men tried by the summary court and 96 others were dishonorably discharged from the service for cause.

Activities.—The main field of activities of the constabulary during the year was in Mindanao-Sulu and in the Visayas, where the organization, as already stated above, conducted operations against recalcitrant Moros and suppressed the Intrencherado and the Pulajan uprisings. A detailed statement of these operations is contained in the report of the chief of constabulary. Aside from its regular work of maintaining law and order, the constabulary, as in previous years, assisted other offices of the government in quarantine work and in furnishing guards or conducting investigations, etc. It likewise furnished guards to help in the preservation of peace and order during the last general elections (1928).

The constabulary made 261 opium raids during the year in which 399 persons were caught; 754 gambling raids in which 4,472 persons were apprehended and

the amount of ₱15,028.68 confiscated. In addition, the organization captured 185 firearms consisting of rifles, shotguns, homemade shotguns, revolvers, homemade revolvers, and pistols; recovered 227 carabaos, 33 horses, and 48 cows, and captured or seized ₱47,216.54 worth of other effects of crimes. It made a total of 3 expeditions during the year and covered 1,815,275.06 kilometers of patrol; 15 encounters were had with outlaws in which 36 outlaws were killed, 17 wounded and 130 captured. In all these encounters only 2 enlisted men were killed and 2 wounded. There were no casualties for officers.

Constabulary control of municipal police force.—The constabulary continued to be in charge of the municipal police forces of Jala-jala, Rizal, and Cavite, Cavite. In addition, during the year under review, the police forces of the municipalities of Las Pinas, Paranaque, Pasay, Malabon, San Pedro Makati, Caloocan, Taytay, Navotas, and Marikina, all of the Province of Rizal were placed under constabulary control for the best interests of the public. The municipal police forces of Maragondon, Cavite, Davao, Davao, and Dumaguete, Oriental Negros, were likewise placed under the control of the constabulary during 1928.

The constabulary control of the municipal police forces in the entire Province of Masbate which started in August, 1926, was withdrawn on October 18, 1928, by order of the Governor General.

Firearms.—The total number of permits and licenses issued by the chief of constabulary up to and including December 31, 1928, was 39,832 as compared with 38,059 in 1927, or an increase of 1,773. Those issued in Mindanao and Sulu were 4,596 in 1928 as compared with 4,367 in 1927, or an increase of 229. The total number of firearms in the hands of the provincial governments for the use of provincial officials in the performance of their official duties during 1928 was 1,673 as compared with 1,669 in 1927, or an increase of 4; those owned by municipalities were 7,677 as compared with 7,402 in 1927, or an increase of 275. Sixteen firearms belonging to the constabulary were used by Provinces and municipalities in 1928 as compared with 32 in 1927, or a decrease of 16.

Expenditures.—The cost of maintenance of the Philippine Constabulary for 1928 amounted to ₱5,167,179.89, which is ₱61,851.34 more than that of the previous year. In addition, the sum of ₱100,797 was used for the purchase of equipment. This increase in expenditure was due to the increased activities of the constabulary in the maintenance of law and order, the constant movement of troops in connection with quarantine duty, and the numerous investigations made for the United States Veterans' Bureau, the Commissioner of Pensions, the public welfare commissioner, and the national exchange company.

OFFICE OF THE PUBLIC WELFARE COMMISSIONER

The public welfare and social service work of the government and the coordination of the work of private agencies receiving subsidy from the government and engaged in charitable and social service activities were successfully and efficiently handled by the office of the public welfare commissioner.

The outstanding accomplishments of this office for the year under review are the following:

(1) With reference to the maternity and child hygiene work, 184 puericulture centers with an attendance of 799,257 mothers and children (December not included) were aided.

(2) The transfer of the maternity house located at 350 Isabel, Sampaloc, Manila, to 2479 Manuguit, Tondo, Manila. The new quarters provide for more adequate and better facilities for the training of puericulture center workers.

(3) The construction of four more buildings in Welfareville where dependent children are taken care of and the improvement of its playgrounds.

(4) The increase in the number of cases handled by the probation section of the office in connection with its work on juvenile delinquency.

(5) As a coordinating agency of the different organizations engaged in social service, the office of the public welfare commissioner started during the year a study of the problem of providing adequate nutrition. A scientist from the University of the Philippines was detailed in the office of the public welfare commissioner for this purpose.

The final report of the office of the public welfare commissioner is now in process of preparation and will be completed upon receipt of all the reports from the Provinces. Advanced statistical information concerning the activities of this office were already forwarded to that office on February 13, 1929. The preliminary report of this office is submitted herewith.

THE PHILIPPINE GENERAL HOSPITAL AND ITS BRANCH, THE SOUTHERN ISLANDS HOSPITAL

Accommodations.—The lack of sufficient accommodations continued to be a problem for the Philippine General Hospital. However, the number of patients who were refused admission during the year due to lack of beds was reduced to 3,546 as against 6,482 in 1927, or a decrease of 2,936; and in the Southern Islands Hospital, 2,505 as against 2,343 in 1927, or only a slight increase of 162.

Improvements made.—Several important constructions in the Philippine General Hospital were undertaken and completed. Among these may be mentioned the following: The erection of the 2-story pavilion for typhoid cases; the alterations and construction of the pay ward of floor 18; the enlargement and transfer of the dental clinic to the upper floor of the dispensary; the construction of new gutters and wire fence around the hospital grounds; the overhauling of the two old ambulances of the institution and the purchase of new Packard ambulance; the acquisition of a new ultraviolet burner for the department of physical therapy, and the construction of new minor improvements to provide for added convenience.

Patients treated.—The number of patients treated in the Philippine General Hospital during the year was 102,547 as against 94,746 in 1927, or an increase of 7,801. Of the 102,547 patients treated, 13,677 were treated in the wards; 61,598 in the free dispensary; 4,454 in the emergency division; 3,059 in the consultation office; 13,504 in the physical therapy department; 3,219 in the out-obstetrical service; and 3,036 in the social service section. Of the 13,677 patients treated in the wards, 9,478 recovered, 2,231 improved, 678 unimproved, 34 transferred to other hospitals, 2 absconded, and 803 died. The average daily number of patients treated was 476. The number of births was 2,310 as compared to 2,152 in the previous year (1927), or an increase of 158. The rate of mortality was 5.87 per cent as against 6.39 per cent in 1927. The number of days of hospital treatment for 1928 was 174,105; it was 169,770 in 1927.

In the Southern Islands Hospital the total number of patients admitted during the year was 2,716 as against 2,549 in 1927, or an increase of 167. The total number of discharged patients was 2,716 as compared with 2,542 in 1927. The total number of days spent by discharged patients was 27,693 as against 28,591 in 1927. The average daily number of patients treated increased from 78 in 1927 to 84 in 1928. The number of deaths in this hospital increased from 188 in 1927 to 226 in 1928, and the number of births likewise increased from 49 in 1927 to 52 in 1928. The number of dispensary patients treated was 12,883 in 1928 as against 13,093 in 1927.

School of nurses.—The Philippine General Hospital School of Nursing graduated 91 students in 1928 as compared with 73 in 1927, or an increase of 18. The Southern Islands Hospital graduated 10, the same number as in 1927.

Scientific papers.—As usual, several members of the staff of the Philippine General Hospital prepared scientific papers dealing on the interesting medical cases treated, and these were given due publicity. The report of the director of the Philippine General Hospital contains a complete list of these scientific papers.

Financial statements.—The total expenditures of the Philippine General Hospital for 1928 amounted to ₱898,893.80 as against ₱882,087.65 for 1927, or an increase of ₱16,806.15; those of the Southern Islands Hospital amounted to ₱135,836.41 as compared with ₱143,193.19 in 1927, or a decrease of ₱7,356.78.

The income of the Philippine General Hospital for 1928 was ₱165,543.14 as against ₱160,074.54 for 1927, representing an increase of ₱5,468.60; that of its branch in Cebu was ₱31,523.12 as compared with ₱29,210.87, or an increase of ₱2,312.25.

The average cost per capita of patients in the Philippine General Hospital was ₱5.16 in 1928; ₱5.20 in 1927, and ₱5.27 in 1926; that of the Southern Islands Hospital was ₱4.91 as compared with ₱5.01 in 1927, or a decrease of ₱0.10 per capita.

BOARDS OF EXAMINERS

Registration.—There were 112 physicians and 11 midwives registered during 1928; 206 pharmacists, 327 apprentices in pharmacy, 28 pharmacy clerks, 11

Chinese druggists, and 12 Chinese druggist clerks; 165 dentists; 229 nurses, and 4 optometrists.

The policy of ridding the country of illegal practitioners in medicine, dentistry, and optometry was carried on vigorously during the year with the cooperation of the Philippine Constabulary and as a result thereof several persons were prosecuted and convicted by the courts.

At the end of the year under review, according to the records of the boards, there were 2,104 physicians, 1,834 pharmacists, 892 dentists, 2,404 nurses, and 256 optometrists authorized to practice in the Philippine Islands.

Miscellaneous activities.—Aside from their regular duties of giving examinations, the boards of examiners held several meetings at which administrative cases for alleged malpractice, immoral and unprofessional conduct, etc., against physicians and pharmacists were taken up. As a result, three physicians and one pharmacist were suspended. The board of pharmaceutical examiners and inspectors collected 333 samples of both local and foreign pharmaceutical products, 199 of which were found by the board to be of good concentration and 134 misbranded and adulterated; authorized the opening of 81 new drug stores and pharmacies, 35 new Chinese drug stores, and 10 dispensaries of hospitals and asylums, and in addition it inspected 350 drug stores scattered in Manila and in different Provinces during 1928. Due to the inspection conducted and the strict supervision exercised by the board of pharmaceutical examiners and inspectors over pharmacies, drug stores, and similar establishments, few violations of pharmacy laws and regulations were committed.

Income and expenditures.—The income of the boards of examiners in 1928, derived mainly from examinations and registration fees, amounted to ₱41,544.51 and the expenditures, ₱41,039.39.

CITY OF MANILA

General statement.—Harmony and efficiency have been the characteristic features of the administration of the affairs of the city of Manila during the administration of Mayor Tomas Earnshaw.

Controversy with the metropolitan water district.—During the year the controversy between the city of Manila and the district relative to the question as to whether or not the city is bound to pay for water consumed by it was solved to the satisfaction of all concerned. By agreement between the parties concerned the annual charges to the city are considerably reduced.

Assessment.—During the year under review 2,156 new houses were inspected and listed for taxation at a total assessed valuation of ₱6,347,963 as compared with ₱6,475,680 for 1927, or a decrease of ₱127,717. Of these new improvements, 985 were buildings of strong materials and 1,171 of light and mixed materials.

The total assessed valuation of taxable real estate in the city in 1928 was ₱257,175,236 as compared with ₱256,208,281 in 1927, or an increase of ₱966,955. The total value of exempt property amounted to ₱132,957,760 as compared with ₱134,403,715 in 1927, or a decrease of ₱1,445,955.

Education.—The total number of pupils enrolled in the day and night schools in the city for 1928 was 68,826 as against 67,632 for 1927, or an increase of 1,194.

Crimes.—The total number of cases filed by the office of the city fiscal in 1928 was 23,372 as against 22,098 in 1927, or an increase of 1,274. The most common and important offenses and crimes committed were insults, damage to property through reckless imprudence, physical injuries through reckless imprudence, estafa, violation of internal revenue law, abduction, concubinage, seduction, abuse of chastity, homicides through reckless imprudence, perjury, assault upon persons in authority, and counterfeiting. While there was a considerable increase in the number of cases of estafa, there was nevertheless a large decrease in the number of cases for theft, there being 419 in 1927 as against 213 in 1928. Robbery cases likewise registered a decrease, 121 having been filed in 1927, while only 101 were filed in 1928. The police department showed efficiency in the work of the arrest and conviction of violators of the law and in the maintenance of law and order.

Fire losses.—The total loss from fires which occurred during 1928 amounted to ₱877,414, as against ₱1,517,493 in the preceding year, or a decrease of ₱640,079.

Public improvements.—The Bonifacio Elementary School Annex (20 rooms) wooden building costing ₱58,755; the Dasmarinas Bridge and the Pretil Bridge

were the outstanding constructions undertaken during the year. Other constructions were made by the city but they are not mentioned here inasmuch as they are considered of minor importance. Forty-five thousand three hundred and seven square meters of new streets were opened; the asphalted area of street was increased by 13,775 square meters; 5,255.48 square meters of sidewalk, 1,512.78 lineal meters of curb and 1,473.54 lineal meters of gutter and drainage were constructed. Aside from these, there were 36,319 square meters of lowlands filled with garbage and 110,904 square meters of parks filled and graded and about 6,428 trees, shrubs, palms and vines planted.

Income and expenditure.—The resources of the city for 1928, which represent collections made from all sources plus the cash surplus at the beginning of 1929, amounted to ₱9,370,303.18 as against ₱8,973,618.60 for 1927, or an increase of ₱396,684.58. The total expenditures for 1928 were ₱8,148,324.95 as against ₱7,373,808.74 for 1927, or an increase of ₱774,516.21. The unencumbered surplus of the city at the end of the year amounted to ₱884,902.48.

Legislation.—The most important legislation affecting the city of Manila passed during the last regular sessions of the Philippine Legislature is Act 3456 which authorizes the city to issue bonds amounting to ₱10,000,000 for the acquisition and construction of permanent public improvements. With the passage of this act the city government will be able to carry out its long-cherished plan of undertaking important public improvements.

National theater.—While the construction of a theater is not an undertaking of a municipal character, nevertheless, in response to public clamor, the mayor appointed a committee which took charge of the organization and incorporation of the "Metropolitan Theatre Co." The city conveyed, with the approval of the municipal board, a portion of the former botanical gardens as site for the future national theater.

CITY OF BAGUIO

Public works.—In view of the absence of the city engineer who was on leave in the United States during the greater part of the year, the duty of supervising public works devolved upon the city overseer, Mr. William H. Reese. Among the most important public improvements undertaken and completed during the year under review may be mentioned the construction of a 60-foot span steel bridge on Lucban Road; the construction of 4,258 meters of new roads in different sections of the city, 3.6 kilometers of which is first-class road; the maintenance and improvement of public buildings; the construction of a storm sewer with a total length of 480 meters; the extension of sewer system with a total of 6,000 lineal meters; the manufacture of 18,304 pieces of various sizes of concrete pipes, posts, and monuments; the extension of the water-supply system by 3,000 meters; the installation of 16 fire hydrants at different places in the city; the extension of the street light system by 2,307 meters; the improvement of the telephone system; the placing of 33,670 square meters of asphalt on various city streets, and the improvement of the city market.

Utilities and operations.—The utilities of the city of Baguio, consisting of the telephone system, ice plant, electric-light plant, market and slaughterhouse, pail and garbage, and the water-supply system, made a profit of ₱123,984.88 in 1928 as against ₱107,605.73 in 1927, or an increase of ₱16,379.15.

Building construction.—One hundred thirty-four permits for construction of buildings were issued during the year, with a total cost of approximately ₱524,021.50 or ₱180,240.30 more than the cost of constructions of the previous year. For the purpose of comparison, the number of building permits issued for the last three years and their proximate costs are given below.

Year	Number of building permits	Estimated cost
1926.....	62	₱160,455.00
1927.....	100	343,781.70
1928.....	134	524,021.50

Law and order.—All of the 305 criminal cases filed before the justice of the peace court of the city of Baguio with the exception of 1 which was filed on December 26, 1928, were disposed of. The 15 civil cases filed before said

court were likewise disposed of before the end of the year. The fines and fees collected in 1928 amounted to ₱3,977 as against ₱4,293.03 in 1927, or a slight decrease of ₱316.03.

There were 643 arrests made during the year as again 740 in 1927, or a decrease of 97; ₱1,439.50 worth of articles was recovered as against ₱999.61 in the previous year.

Health and sanitation.—Baguio enjoyed a very healthy and sanitary condition during the year under review. No epidemic of any kind broke out.

Health talks were given in the schools, and antidysentery vaccine was administered to 3,198 children. The city dispensary was opened every day throughout the year, and 1,317 consultations were attended and 2,321 surgical treatments made.

Assessment.—The total assessed value of real estate in the city of Baguio in 1928 amounted to ₱9,973,845 as against ₱9,453,180 in 1927, or an increase of ₱520,665. The total value of properties exempt from taxation amounted to ₱6,573,600 in 1928 as against ₱6,416,205 in 1927, or an increase of ₱157,395. The total value of real property subject to tax in the city of Baguio was ₱3,400,245 in 1928 as compared with ₱3,036,975 in 1927, or an increase of ₱363,270.

Financial statement.—The total collections made from all sources, including the balance in 1927, amounted to ₱798,571.26 and the expenditures to ₱673,288.24, leaving a balance of ₱125,283.02 at the end of the year. Detailed statement of the financial operations of the city is given in the report of the mayor.

Visitors.—The city of Baguio is becoming more and more popular as a health resort among peoples of different nationalities. Whereas in 1927 the number of visitors who went to Baguio was 22,003; during 1928 this number increased to 24,772.

As in previous years, Baguio was chosen as convention city both by governmental and private entities.

METROPOLITAN WATER DISTRICT

In general.—The district functioned efficiently and, on the whole, satisfied the public. It registered increased collections and reduced expenditures for routine work.

Accomplishments.—The number of active water services increased from 21,391 in 1927 to 23,165 in 1928, or an increase of 1,774. The number of active sewerage connections was 7,394 in 1928 as compared with 7,188 in the previous year, or an increase of 206.

The watersheds, headworks, roads, Santolan pumping station, aqueduct, deposito, the distribution system, and the sanitary sewerage system were kept in good condition. Repair work was promptly attended to. The district is now in possession of practically all of the Novaliches watershed, as a considerable portion of same was purchased by it, while the remainder is now being expropriated. Likewise the Angat watershed of some 265 square miles of land is now controlled by the metropolitan water district.

There were 2,240 fire hydrants repaired and painted in 1928 as against 2,329 in 1927 and 2,369 in 1926. The cost of repair and maintenance of fire hydrants was ₱7,746.56 in 1928 as against ₱7,870.12 in 1927 and ₱12,979.82 in 1926.

The water supply during the dry season of 1928 was as good as that of 1927, due to a well-distributed rainfall.

The per capita consumption has remained practically stationary for the last few years and is somewhat over 70 gallons per capita. The exact per capita consumption can not be ascertained, due to the fact that the Venturi meter is overloaded at maximum hours of consumption. Arrangements, however, will be made by the district to enable it to determine the exact per capita consumption in the future.

The work on the extension of the water supply progressed considerably during the year under review.

Financial condition.—The financial condition of the district continued to be satisfactory. Its gross income, 15 per cent of which was spent for salaries and wages, amounted to ₱1,740,374.95 for 1928 as against ₱2,028,202.43 for 1927 or a decrease of ₱287,827.48. This decrease is due to three causes, namely, (a) 1927 collections consisted of five quarters; (b) collections from the city of Manila were reduced by ₱120,000 due to the agreement had between the former and the metropolitan water district, and (c) interests on bank deposits were considerably reduced because ₱2,000,000 of bond issue funds

were used during the year and earned no interest. Giving due allowance to these circumstances, the comparative income of the district for 1928 was ₱80,000 more than that for 1927.

The total gross disbursements amounted to ₱1,543,896.20 as against ₱1,216,258 for 1927, ₱1,175,100.04 for 1926, and ₱1,051,565.69 for 1925.

The net assets of the district at the close of 1928 amounted to ₱11,054,970.83 as compared with ₱9,684,844.21 for 1927, or an increase of ₱1,370,126.62. The net assets of the district on July 1, 1919, when it was first organized as a separate entity, were ₱3,283,411.91.

PENSIONADOS

Number.—After competitive examinations, 15 pensionados were appointed out of the allotment of 20 approved by the pensionado committee for 1928. The remaining 5 scholarships were unfilled at the close of the year. Eleven were appointed partial pensionados from those who qualified in the examinations. At the close of the year under review, 64 pensionados were on the rolls, 24 of whom were partial and the rest full pensionados.

Accomplishments.—With few exceptions, all the pensionados maintained satisfactory scholarship records. Without neglecting practical training, a great many of them succeeded in obtaining academic degrees ranging from the bachelor's to the doctor's degree. A large number of pensionados were elected to honorary societies in view of excellent scholarship. On the whole government pensionados maintained good health and satisfactory conduct.

Philippines pensionado agent.—The Philippines pensionado agent efficiently handled the work of supervising our government students abroad. In addition to the regular office work which she had to attend to, the Philippines pensionado agent visited 13 cities during the year and held conferences with individual pensionados as well as a large number of professors and officials of the United States Government in connection with programs for travel and practical work of our government students. She likewise inspected the living accommodations of many pensionados.

As stated in previous years, aside from her duties of supervising the work of regular and partial pensionados, the Philippines pensionado agent had to look after the university fellows, the special fellows, and the pensionados of the department of public instruction under Act 3290.

Expenditures.—Out of the ₱280,000 appropriation for government scholarships in 1928, ₱219,275.02 was expended. There was therefore a balance of ₱60,724.98 as against ₱58,879.87 in 1927. The large unexpended balance in 1928 was due to unfilled scholarships and to the policy of strict economy of the pensionado committee which was faithfully observed by the Philippines pensionado agent.

The average annual expenditure for each student in the United States and in Europe for 1928 was ₱3,125.95. For purposes of comparison, the average annual expenditure for each pensionado for the past five years is given below:

Year	Amount
1924.....	₱3, 059. 50
1925.....	3, 097. 86
1926.....	3, 065. 44
1927.....	3, 106. 16
1928.....	3, 125. 95

Naturalization.—The naturalization papers of 62 foreigners were received in this department for custody, in accordance with the provisions of Act 2927. These papers show that 50 foreigners were naturalized during the year, their nationalities being as follows: Spaniards 16, Chinese 10, Russians 7, Frenchmen 4, Turks 3, English 2, Germans 2, Italian, Greek, Syrian, Norwegian, Arabian, and Palestine, 1 each.

Very respectfully,

HONORIO VENTURA,
Secretary of the Interior.

His Excellency the GOVERNOR GENERAL,
Manila.

ANNUAL REPORT OF THE SECRETARY OF PUBLIC INSTRUCTION

DEPARTMENT OF PUBLIC INSTRUCTION,
Manila, March 23, 1929.

His Excellency the GOVERNOR GENERAL, *Manila.*

SIR: I have the honor to submit the twenty-seventh annual report of the department of public instruction for the calendar year 1928.

GENERAL STATEMENT

The organization of the department and the bureaus and offices thereunder during the year was as follows: Secretary of public instruction, Hon. Eugene A. Gilmore, in his capacity as vice governor; undersecretary, Hon. Alejandro Albert; director of education, Luther B. Bowley; assistant director, Gabriel R. Mañalac; director of health, Jacobo Fajardo; chief quarantine officer, C. R. Eskey, relieved May 19 by R. W. Hart; commissioner of private education, W. G. M. Buckisch.

The vice governor continued to serve as Acting Governor General until the arrival of Hon. Henry L. Stimson, the new Governor General, on March 1, when he resumed his duties as secretary of public instruction. On March 28 he left for the United States on official business and returned on October 29. During the period he was serving as Acting Governor General and during his absence from the islands the department of public instruction was in charge of the undersecretary. The assistant director of education left the islands on October 6 on official visit to the United States for the purpose of making a study of vocational schools and was absent for the remainder of the year.

The administration of all public schools was conducted through the bureau of education, and the supervision of recognized private schools and schools permitted to operate was conducted through the commissioner of private education. The secretary of public instruction is ex officio chairman of the board of regents of the University of the Philippines and in that capacity participates in the general administration of that institution. The director of education is likewise a member of the board of regents.

The government activities in the field of sanitation and public health were carried on through the two bureaus of this department, the bureaus of health and of quarantine service. Similar or allied activities are also carried on under the department of the interior, which has jurisdiction over the Philippine General Hospital, the Southern Islands Hospital, the public-welfare commission, and the examining boards of medicine, nursing, dentistry, and pharmacy. In the department of agriculture and natural resources various experimental stations are operated. Under the jurisdiction of the bureau of science, within this department, there is carried on the manufacture of serums, vaccines, and toxins and examinations of specimens for health authorities.

The head of the department of public instruction is chairman of the teachers' pension and investment board, having charge of the administration of the retirement fund provided for teachers by Act No. 3050, passed in 1922, and amendments thereof. He is also chairman of the biological products board established by Act No. 3073 in 1923, charged with the regulation of the sale in the islands of viruses, serums, toxins, and analogous products.

Besides the usual activities in the bureau of education, much attention was given to fundamental problems of education. The educational survey of 1925 pointed out that one of the needs of the public-school system was more ample provision for educational leadership and direction in the central office of the bureau. The legislature, acting on this recommendation, made provisions for one specialist in each of the following fields: Agricultural and rural education, reconstruction of school curricula, elementary instruction, teaching training.

During the year the first three of the positions were filled. This additional personnel, together with the regular personnel of the bureau, devoted much time to the question of curriculum construction, elementary education, and vocational education. A special committee was also created by the bureau for the purpose of making a survey of vocational and industrial opportunities in order to determine the extent to which existing agricultural and trade schools were meeting the economic needs of the islands.

With respect to the private schools under the jurisdiction of the department, there was begun in 1926, prompted in large part by the educational survey of the preceding year, and made possible by a substantial increase in the appropriation of the department for this purpose, the work of codifying and clarifying existing regulations concerning standards, increasing and improving inspection and supervision, and securing a better observance of the established standards. The carrying out of this work has been substantially completed during 1928. The result was that private schools having government recognition were in a much better condition. Public confidence in such schools was appreciably increased.

The health and quarantine activities of the department were carried on as usual. The special advisory committees of previous years were continued, such as the advisory committee for the control of leprosy, the advisory committee on malaria control, and the advisory committee on health and physical education. These committees are presided over by the secretary of public instruction and, as their names indicate, serve as advisory bodies for his guidance in the administration under the jurisdiction of the department. Their membership is drawn from the respective bureaus concerned and from the personnel of the United States Army stationed in the islands. They have devoted much time to matters submitted to them and have been very helpful to the department.

The program of malaria control which began intensively two years ago was continued. During the year Dr. Cristobal Manalang, chief of the division of malaria control of the bureau of health, was sent to Cairo to attend the international congress of tropical medicine and was detailed to visit India, the Malay Peninsula, and Java for the purpose of studying malaria conditions there and methods of control.

The scientific study of the treatment and cure of leprosy continued to be an important activity. The work began in 1927 of raising a special fund of \$2,000,000, to be known as the Leonard Wood Memorial Fund for the Eradication of Leprosy, continued throughout the year. A corporation for the purpose of holding and administering this fund was organized in the United States. While the purpose of this corporation is to aid the Philippine government in research on leprosy and antileprosy measures, it is independent of the government but works in closest cooperation with it through a Philippine committee composed of the Governor General, the undersecretary of public instruction, and the chief pathologist of the Culion Leper Colony. During the year a donation of ₱360,000 was made by Mr. Eversley Childs, of New York, for the establishment of a regional treatment station at Cebu. The construction of this station was begun during the year.

Substantial progress was made during the year in improving the conditions for the care of the insane. The first three units of the new psychopathic hospital located at Mandaluyong were completed and about 400 insane transferred to this location, thus relieving the serious congestion at San Lazaro Hospital. Appropriations are available for additional units. The construction of these is in process.

The total appropriations for 1928 of the bureaus and offices under the department of public instruction were as follows:

Bureau or office	1927	1928	Increase or decrease
Department of public instruction.....	¹ ₱97,300	² ₱107,500	+ ₱10,200
Bureau of education.....	16,529,046	16,680,837	+151,791
Philippine health service.....	3,603,412	3,730,426	+127,014
Bureau of quarantine service.....	165,244	165,244	-----
Total.....	20,395,002	20,684,007	+289,005

¹ Approximately ₱50,000 is for the office of the commissioner of private education.

² Approximately ₱50,000 is for the office of the commissioner of private education.

Both the 1927 and 1928 figures for the department of public instruction (including the office of the commissioner of private education) exclude the share of the department in the allotment for sundry or miscellaneous expenses which are appropriated in lump sums as common funds for all the departments of the executive branch of the government. However, the inclusion of these items will not materially change the proportion between the appropriations for the two years. It may be stated that the expenses of the department for the past three years out of such common appropriations averaged less than ₱7,500 per year.

A brief discussion follows of the activities of the agencies under the department. More detailed statements and statistical data will be found in the preliminary reports annexed hereto and made a part of this report.

BUREAU OF EDUCATION

Review of the year.—Among the encouraging features of the year's work may be noted: An increase in enrollment; an increase of 8.63 per cent in the school funds from all sources; a decrease of 0.74 per cent in the total number of students leaving school prematurely; an improvement of 0.56 per cent in the regularity of attendance; a growing interest in the study, speaking, and reading of English; an increase of 0.95 per cent in the number of promotions; an increasing enrollment in vocational schools; a decided improvement in teaching shown by the results of the second survey test throughout the islands; a decided increase in the number of teachers attending vacation normal schools; a 5 per cent increase in the number of Filipino teachers trained either in a normal school or a college of education; the establishment of a professional magazine sent to each teacher; and the evolving of better curricula through the work of committees.

Children of school age in school.—The year 1928 kept up the improvement started by the preceding year in annual enrollment in the public schools, although the proportion of enrollment in those schools to the total population was slightly smaller in 1928 than in 1927. The ratio of enrollment to children of school age also suffered a negligible decrease in 1928. The fact that funds have not been provided in amounts commensurate with the rate of increase in total and school populations of the islands, was the principal cause for the decreases. This tendency may continue in the future unless more funds are made available annually. If additional funds continue to be appropriated, as they were for 1929, it is hoped that the percentage of population in school will soon show an increase instead of a decrease.

Enrollment by courses.—The enrollment by courses—primary, intermediate, and secondary—showed a steady tendency to spread out, correcting the former unbalanced distribution. The proportion of the total enrollment in the primary course was decreasing slightly each year, while the proportion of the total enrollment in the intermediate and secondary courses was gradually increasing. The increasing influx of students in the secondary schools is causing a financial difficulty. The resulting increase in expenses was met by two expedients—a slightly greater portion of the expense for advanced education was borne by the Provinces, and tuition was charged in secondary schools. Public education received 23.45 per cent of the total government expenditures, the insular government supplied about two-thirds of the total amount, the provincial and municipal governments the remainder.

In the elementary grades 96.86 per cent were enrolled in the general courses, less than 1 per cent in the trade courses, and 2.28 per cent in the farming courses. This latter figure was slightly less than that for 1927.

On the contrary, the general secondary course, while still by far the most popular of all secondary courses, showed a decrease in the percentage of the total secondary enrollment. While the number of students in vocational schools (11,206) seems small, the enrollment was 500 more than the enrollment in secondary academic courses in 1920.

Increased holding power of the schools.—There has been, in recent years, a gradual decrease in the percentage of pupils leaving school prematurely, thus indicating a corresponding increase in the holding power of the public schools. This decrease was specially large in the secondary schools during the school year 1927-28.

Promotion percentages.—The percentage of pupils promoted had been gradually increasing during the three school years beginning with the year 1923-24.

In 1926-27 there was a slight setback in this tendency, but in 1927-28 it rose up to 81.55, nearly equal the corresponding figure for 1925-26, which was 81.61.

Effect of minimum salary law.—The average monthly salary of Filipino teachers was greater in 1928 than that in 1927. While there were still reported in 1928 teachers receiving as low as ₱25 per month, this situation had been in part taken care of by the law passed at the end of 1927 making ₱40 the minimum salary in the bureau of education. The effect of this law will not be clearly shown until the figures for 1929 are made available.

Agricultural activities.—There were 14 agricultural schools, 16 farm schools, and 277 settlement farm schools operating in 1928, as compared with 14 agricultural schools, 15 farm schools, and 274 settlement farm schools in 1927. The cultivated area for such agricultural schools was greater in 1928 than that in the preceding years. The enrollment in both the agricultural and farm schools showed a decrease, and the total value of home products from these schools decreased ₱33,000.

Specialist in curriculum construction.—One specialist in curriculum construction was appointed the latter part of the year. This is one of the four educational specialists for which provision was made by the Philippine Legislature in 1927.

School expenditures.—For the year 1928 the amount expended for school buildings was ₱1,594,500 as compared with ₱1,444,500 for 1927. From 1925 to 1927 there was a gradual increase in the government expenditure per pupil. The total governmental expenditures per capita in 1927 was ₱2.35, an increase of 8.6 per cent over 1926. Of this amount, 64.97 per cent was insular, 14.47 per cent provincial, and 20.56 per cent municipal. The increase was almost equally divided between the insular and provincial governments, the municipal increase being less than 2 per cent.

Professional training of teachers.—In addition to the regular courses given in the normal schools during the academic year, there were summer normal courses held in the following places: Manila, Baguio, Cebu, and Zamboanga. The total enrollment in these schools increased from 1,939 in 1926 to 3,644 in 1928. The growing emphasis on the requirements for educational qualifications of teachers in the service largely accounts for the increase in enrollment. The fact that admission to the vacation normal schools is being limited to teachers of high mental qualifications apparently explains why, for 1928, the percentage of promotions by subjects was higher than for 1927. Elementary and secondary institutes, professional reading clubs, a health bulletin, and the Philippine public schools were other methods of training teachers in service.

The number of professionally trained teachers is increasing in all types of schools, causing an increase of over 5 per cent in the number of Filipino teachers in 1928 over 1927, who were normal or college of education graduates. An annual replacement of about 20 per cent on account of these requirements has made it possible to improve the personnel.

The 1928 figures show a slight increase over 1927 in the percentage of teacher replacements, this increase taking place with reference to insular and municipal teachers, while the replacement of Provincial teachers was smaller during the year.

An examination of the figures regarding professional training of teachers in secondary schools shows an increase in the number of professionally trained teachers employed in 1928 as compared with the preceding years. But the percentages of secondary teachers who were graduates either of education or of liberal arts courses showed only a slight gain, due to the fact that there was a considerable increase in the total number of teachers employed in secondary schools.

Table No. 7 shows that 39 per cent of the secondary English classes were taught by American teachers and 61 per cent by Filipino teachers. In normal courses, however, almost 93 per cent of the English classes were handled by American teachers. The majority of the third and fourth year English classes in all other types of secondary schools were taught by American teachers. Filipino teachers taught most of the first and second year English classes in the same schools.

Table 27 shows a decided and continued increase of critic teachers with adequate professional training. While the percentage of all normal and college of education graduates for the year 1926 was 66.9, that for 1928 was 90.0 the percentage of college of education and Philippine normal school graduates increased from 52.6 in 1926 to 86.1 in 1928. The graduates of the general high-school course, trade schools, and undergraduates with in-service

training and successful experience in teaching, have gradually been reduced by 66 per cent in 1928 from 1926, and their places taken by teachers of better qualifications.

Tenure of teachers.—Table 28 shows that a very large proportion of the classroom teachers had still less than three years of teaching experience. The median in years of teaching experience of Filipino teachers and principals in the elementary schools was 3.87 the median for high-school teachers was 3.5 years. The median of teaching experience for all elementary and secondary teachers and principals was 3.85 years. The percentage of teachers with longer experience is increasing due to the inducement of the pension law.

Teachers' pension and investment fund.—The following data furnished by the teachers' pension and investment board show the extent of operation of this law:

Number of teachers retired for the period June 1, 1922, to December 31, 1928, 409.

Number of teachers retired in 1928, 138.

Number of teachers who returned to duty, 2.

Number of teachers who died without any beneficiary, 1.

Amount collected to the credit of the teachers' pension and disability fund during 1928, ₱2,348,925.14.

Amount collected to the credit of the teachers' pension and disability fund for the period June 1, 1922, to December 31, 1928, ₱10,215,317.56.

Progress in different phases of instruction.—An improvement is shown in the results of the second central-academic-normal survey completed this year with tests equivalent to those used in the first survey. That remedial steps begun in 1926 are effectively reducing overageness, is indicated in age-grade census and progress studies carried on in 1928.

Health education.—Health education received special consideration during the year. Preliminary negotiations were held with a view of securing a specialist in this field. In the appropriation act passed during the year for 1929 a provision was made for this specialist. The work of constructing a health education program and of revising the curricula to carry out this program was begun.

Legislation.—Continuation of popular interest in education was shown by the granting of liberal appropriations for operation and for the construction of school buildings. A slightly larger amount, ₱16,680,837, was provided in the general appropriation act, as against ₱16,529,046 in the previous year. In the public works act the amount of ₱1,715,200 for school buildings was appropriated, as against ₱1,645,500 for 1927. During the year the vocational education act (Act 3377), passed in 1927 and designed to encourage agricultural and vocational education, was put into operation. The division of vocational education of the bureau of education was organized, additional personnel appointed, and the department of agricultural education was established in the college of agriculture at Los Baños. Pensionados for the course and similar courses in the Philippine School of Arts and Trades, and additional teachers for farm and trade schools were appointed. Trade and agricultural courses in the Provinces were extended. Progress was made toward putting vocational schools on a secondary basis. A specialist in rural and vocational education was appointed.

School needs.—Following are among the needs brought out by the director of education: The establishment of one additional well equipped insular normal school and the appropriation of approximately ₱172,500 for critic teachers; revision of the law prescribing the maximum salary allowable for teaching in night schools where the maximum salary is limited to ₱20 a month at present, creation of a provincial school fund to provide for adequate support, maintenance, and promotion of provincial schools; permissive legislation to increase school revenues; better salaries for better qualified teachers; increase of the salaries for certain clerical positions in the bureau to insure permanence and stable tenure, and to make them comparable in compensation with other clerical positions of similar rank.

OFFICE OF THE COMMISSIONER OF PRIVATE EDUCATION

The year's progress.—In the year 1928 was largely completed the work begun in 1926 of making the system of private schools having government recognition one that would carry out the provisions of the law and justify confidence on the part of the public in the schools having government recognition.

This work consisted of codifying and clarifying existing regulations concerning standards, eliminating unfit recognized schools, increasing and improving inspection and supervision, and securing a better observance of the established standards. The result was that recognized private schools were in a much better condition. Public confidence in such schools was appreciably increased. The execution of this work, however, necessarily gave rise to some dissatisfaction and led to a determined effort on the part of certain schools to secure, during the legislative session of 1928, amendments to the private school act (Act No. 2706) designed to restrict greatly the supervision of recognized schools and to leave the government in a position of responsibility for guaranteeing the work of these schools but without adequate authority to inspect and supervise them so as to insure compliance with reasonable standards. These efforts were unsuccessful. The consensus of legislative opinion supported the present law and the policy pursued in its administration.

Recognitions and permits canceled.—During the year 82 new permits were issued, as compared with 81 in 1927, and 120 in 1926. However, there were 95 cancellations of recognitions or permits in 1928, as compared with 90 in 1927 and 65 in 1926. These cancellations did not in most cases affect the entire schools, but only one or two grades or years each, and many of them were made at the request of the schools concerned.

Enrollment.—Contrary to expectations, the large number of cancellations of approval in 1927 and 1928 did not result in a material decrease in enrollment in any of these years, as the enrollment increased in those schools which retained their government approval. Contributing factors in reducing enrollment are: Voluntary withdrawal of certain primary schools as a result of the liberal arrangements made for pupils of unrecognized primary schools; discontinuance of practice of reporting pupils of unrecognized primary branches; and the call for the enrollment report at an earlier date. Actual results may be seen in the annexed tables.

A manual of information announcing the general standards for private schools is distributed to recognized schools.

Standards.—The present minimum standards as to physical plant, library, and teaching personnel, are as low as consistent with the educational needs of the islands and are such as can be met with a reasonable effort. Fortunately, some schools are considerably above the minimum standards. Most of the schools, however, seem content with observing the minimum requirements. In such schools the quality of instruction leaves much to be desired. As yet there has developed in the private-school system little or no leadership in the field of education.

A great difficulty was encountered in the inspection of certain technical courses and the drawing up of standards for such courses. Particular reference is made to the nursing course, the dentistry course, and the engineering course. Special committees were appointed from the professions to draw up new standards, but progress has been slow. Toward the end of 1928 the service of several capable engineers was finally secured. It is hoped that early in 1929 the revision of the engineering standards will be accomplished.

Supervision.—Since the department is by law charged with the responsibility of establishing and securing the observance of reasonable standards, it is necessary to carry on the inspection and supervision of the schools enjoying government recognition. The policy of the department is to make this inspection and supervision helpful and constructive, and, for the most part, the schools accepted the work of the department in the spirit in which it was offered.

Needs.—Better paid positions for office personnel, provision for an adequate testing section, provision for separate and adequate travel fund, and separate and adequate appropriation for printing purposes.

PHILIPPINE HEALTH SERVICE

The general situation for the year has been undisturbed by epidemics or by any alarming events. There were a few outbreaks of dysentery, none of which reached epidemic proportions. Most communicable diseases showed a slight decrease, with the exception of typhoid fever and diphtheria. The appended statistical tables show a very slight decrease in the general death rate (20.21) over that of 1927 (20.68). The infant mortality rate, however, increased to 154.94 over 152.54 for the previous year. There was a considerable reduction

in the marriage rate (14.07) from that of the previous year (17.49), due perhaps to the restrictions imposed by the new marriage law.

Personnel.—For the year 1928 the health service employed 465 physicians, 2,278 nonmedical personnel, including 341 nurses and 201 appointees in the insular force. During the previous year there were 444 physicians, 2,205 nonmedical personnel, including 305 nurses, and 190 insular appointees. Of the 347 sanitary divisions in 1928, 301 were occupied by qualified physicians, 31 by registered male nurses, and 15 by persons without medical training. Five years ago there were 315 sanitary divisions, 243 of which were in charge of qualified physicians, 42 in charge of nurses, and 30 in charge of nonprofessional personnel.

General sanitation.—An attempt has been made to extend the routine inspection service to all the Provinces. During the past year about 222 municipalities in 20 Provinces were inspected. A rat campaign was conducted in all ports of entry. In Manila 51,163 rats were caught and examined. None of these rats was found positive for plague. Throughout the Provinces there has been a notable increase in the number of toilets installed. Medical relief was given to typhoon sufferers of Samar, Albay, Sorsogon, Leyte, and Cebu; to earthquake victims in Cotabato; to flood sufferers in Bunauan, Agusan; and to fire sufferers in Iloilo and Batangas. The Manila water supply has been improved by the installation of liquid chlorine treatment apparatus. Rigid inspections have been carried on relative to the protection of food supplies. Standard plans for toilets, septic vaults, incinerators, etc., have been prepared in the office and furnished to municipalities throughout the Provinces.

Public health nursing which was carried on as in previous years both in Manila and in the Provinces, showed further usefulness by giving valuable results in the public health campaign to further educate the people.

School medical inspection.—This work is performed as a side activity in the Provinces, and attention given to it was quite limited. In the city of Manila there is one dentist who cooperates with eight other dentists furnished by the Red Cross. Malnutrition among school children, if taken as a measure of the general nutrition of the masses, brings to light a very serious problem concerning public health. Skin and respiratory diseases, secondary anemia, and intestinal parasitism are still the outstanding diseases among school children.

Industrial hygiene.—The service followed up its attempt to inspect shops, factories, and other industrial establishments. The sanitary defects found in these places were ordered corrected, but, due to the limited personnel, satisfactory follow-up work has not been done.

Communicable diseases.—Reports from the Provinces are not entirely satisfactory. During the year there were 16 sporadic cases of cholera with 8 deaths. These occurred in the Provinces during June and July. There were two cases in Manila, both of whom recovered. There has been a slight increase in typhoid fever. This increase in the rate is thought to be due partially to the fact that better hospital and laboratory facilities now exist and render better diagnostic service in this as well as in other disease conditions. Dysentery showed a slight decrease in both incidence and mortality, perhaps due to a more timely discovery of outbreaks and to the widespread use of antidyentery vaccine. Five isolated cases of varioloid were reported. It is thought that some of these cases might have been chicken-pox. Diphtheria showed a slight increase both in Manila and in the Provinces, and a campaign was conducted to detect carriers and to perform, for the first time, toxin antitoxin prophylaxis on a large scale. Tuberculosis showed no marked change, and continues to be a grave health problem in the Philippines. Five malaria control units were operated during the year. Ten thousand pesos worth of plasmochin was purchased during the year to use experimentally in malaria eradication. Preliminary reports show that this drug has considerable possibilities in the treatment of malaria. Beriberi showed a decrease in mortality, undoubtedly due to the use of tikitiki extract, which is still available only in limited amounts. Ten thousand and twenty-nine cases of yaws were treated, mostly in Mindanao and Sulu. There were also reported treated 8,960 cases of tropical ulcers, 13,652 cases of trachoma, and 18,553 cases of scabies.

Hospitals.—Two provincial hospitals, one in Albay with 42 beds and another in Batangas with 30 beds, were constructed under Acts 3114 and 3168. The number of hospitals have increased from 33 to 37 and the number of beds from 2,675 to 2,786. The expenses from funds of the provincial hospital act were estimated at ₱171,697.90, raising the total expenditures to ₱939,496.15 out of ₱1,000,000 appropriated for the purpose. From the ₱500,000 appropriated

by Act 3361 for the construction and equipment of provincial hospitals only ₱172,660 remain unallotted. (For details, see tables.)

Insane asylums.—The Insular Psychopathic Hospital at the end of the year had the following units completed: One administration building used for office and dormitory; one male receiving ward, 200 capacity; one female receiving ward, 200 capacity; one kitchen; a pumping plant with tank and sewer system. The following units are yet to be completed: One male chronic disturb ward, four doctors' quarters, one servants' and helpers' quarters.

Additional funds will be needed to complete the hospital with a female chronic disturb ward, an infirmary and isolation ward, an occupational therapy building, and a building for the criminal insane. With the completion of this hospital the insular insane will be well housed in a central location. All the female insane (177) from San Lazaro Hospital have already been transferred to the new institution.

Dispensaries.—Several standard dispensaries were established in the provinces during the year, one in La Union with an appropriation of ₱2,500 from the balance of the health fund. The popularity of these dispensaries is gaining ground with the public.

Laboratories.—A central laboratory is believed necessary for the performance of certain technical work which it is impossible to perform in a small laboratory. Forty laboratories were operated during the year.

Leprosy.—The Leonard Wood Memorial for the eradication of leprosy started active preparatory work early in the year. This organization is a corporation holding funds collected in the United States to aid the Philippine government in research on leprosy and antileprosy measures. It is essentially independent of the government, with headquarters in New York, but will work in closest cooperation with it, through a Philippine committee composed of the members of the board of directors resident in the Philippines. At present these are the Governor General (chairman), Dr. Alejandro Albert, undersecretary of public instruction, and H. W. Wade, chief pathologist, Culion Leper Colony. A donation of ₱360,000 was made by Eversley Childs, of New York, expressly for a new treatment station at Cebu. The Province of Cebu having arranged to provide a suitable site of some 25 hectares, active construction has been started. The new institution will be opened late in 1929. Preparatory work at the Culion Leper Colony will be started next year. The number of lepers confined in Culion during the year was 5,302; in San Lazaro Hospital, 381; in the Cebu detention camp, 336; and in other detention camps, 140. These were 235 less than the cases treated in 1927. Suitable steps should be taken to transfer cured and discharged lepers to the care of the public-welfare commissioner under whose jurisdiction and control this class of individuals properly comes.

Finance.—The total insular appropriation for 1928 was ₱3,730,426, as against ₱3,603,412 for 1927. The expenditures amounted to ₱3,688,270.33, as against ₱3,499,503.94 for the previous year. A summary of the itemized appropriations and expenditures is given in the annexed tables. In 1924, ₱1,302,726.33 was expended for public sanitation in regularly organized provinces having their own health fund. From 1925 to 1927 this amount increased to an average of about ₱1,400,000 a year. The accumulated balances of provincial health funds were used for the construction of permanent sanitary improvements, such as dispensaries, midden sheds, laundry and bath houses, waterworks systems and reservoirs, sanitary dug wells, and incinerators.

Legislation.—Under Act 3460, the public works act, approved December 7, 1928, for the present year, the following were provided for: Construction of the insane asylum, with ₱200,000 set aside for the purpose; construction of a crematory at the San Lazaro Hospital, at a cost of ₱20,000; construction of leper treatment stations in Albay and Zamboanga, with an appropriation of ₱50,000; completion of the contagious ward in San Lazaro Hospital, with ₱10,000; and construction of additional buildings for the Culion Leper Colony, with ₱30,000. Aside from those and what is taken care of in the general appropriation act, another act, No. 3453, appropriates the sum of ₱20,000 for the construction of the Rizal Memorial Hospital at Dipolog, Zamboanga. Other bills were proposed but were not enacted, and among the important matters provided for therein were the appropriation of ₱60,000 for the purchase of the necessary materials for the manufacture of tikitiki, the compulsory vaccination of children, and the appropriation of ₱50,000 for tuberculosis campaign.

The pension and retirement fund of the bureau of health now amounts to ₱118,358.13, of which ₱106,722.85 is deposited in the Philippine National Bank and ₱11,635.28 is kept in the insular treasury ready for regular payments. The monthly average, accruing to the fund, is ₱5,672.24. There are 47 pensioners, 24 physicians, 15 assistant sanitary inspectors, 3 presidents of sanitary divisions (not physicians), and 5 heirs of deceased pensioners. The average amount monthly paid for pensioners was ₱3,619.49.

The council of hygiene recommended the following: Establishment of a "Barrio Obrero," in a resolution sent to the city authorities for adoption; the fixing of the minimum period of leprosy quarantine at six months, as has been the practice heretofore, under a system whereby paroled lepers could be closely supervised; the extension of sewerage system in Manila, which was supported by the metropolitan water district board, contingent upon the appropriation of funds for the purpose; the inclusion of the director of health and the sanitary engineer in the board of directors of the metropolitan water district; the preparation of a sanitary code to make sanitary regulations in the provinces uniform and effective.

BUREAU OF QUARANTINE SERVICE

General conditions.—The general conditions with respect to the prevention of quarantinable diseases continued satisfactory throughout the year. Although the archipelago with its many islands, extensive coast line, and proximity to infected nearby ports, was greatly exposed to the dangers of communicable diseases, it was practically free from all such diseases during the year. Credit for this is due to the efficiency and vigilance of the quarantine service.

Personnel.—In addition to the chief quarantine officer, whose office is located in the customhouse, there were five full-time medical officers on duty in Manila, one in Cebu, and one in Iloilo, during the year. In the ports of Legaspi, Zamboanga, Jolo, Davao, Cavite, and Olongapo part-time officers carried on the inspection work.

Functions of the bureau of quarantine service.—(1) National or incoming quarantine; (2) interisland quarantine; (3) outgoing quarantine; (4) medical inspection of arriving aliens; (5) physical examination of applicants for licenses as officers on interisland vessels; (6) care, maintenance, and operation of quarantine stations and floating equipment. Two disinfection and detention stations were maintained, one at Mariveles and another at Cebu.

Quarantinable diseases.—Cholera, leprosy, plague, smallpox, yellow fever, typhus fever, and anthrax are designated quarantinable diseases. Cholera, smallpox, and bubonic plague constituted the greatest menace to the Philippines during the year because of their presence in more or less epidemic form in many nearby ports and the constant increase of commercial relations of the islands with these ports, together with the fact that no plague or epidemics of cholera or smallpox occurred during the year.

Cholera was comparatively absent from many nearby ports, especially Hong Kong, Amoy, Shanghai, and Singapore, during 1928, although most of the largest contiguous ports suffered from it, especially Bangkok, where 414 cases with 225 deaths were officially reported. There were 2,385 deaths in Calcutta and 667 deaths in Madras. In Canton, Rangoon, Shanghai, and Singapore cholera threatened at times. Fortunately, the Philippines had no outbreak of cholera during the year.

Smallpox, although present in many places in the Far East, especially Hong Kong, where there were 593 cases and 258 deaths, did not enter the Philippines, due to the vaccination requirements strictly enforced.

Plague continued to be the greatest menace to the islands due to the fact that both rat and human plague were present during the year in many ports closely associated with the Philippines and in epidemic form in some of them. In 1928, 582 vessels were fumigated, and about 2,000 rats examined for plague infection, which were found negative.

Interisland quarantine was not required, but all vessels engaged in interisland trade were fumigated every six months in order to insure safety.

Outgoing quarantine.—As provided by the international sanitary convention, which required supervision over sailing passengers and crews from infected ports, and in accordance with the quarantine laws, all vessels clearing for

United States ports, their crews and passengers, were subjected to inspection and were given bills of health prior to departure. Bills of health were also issued to all vessels leaving a Philippine port, partly as a means of revenue and partly to satisfy a demand of foreign countries.

Medical inspection was made of incoming aliens at all ports of entry by the officers of the quarantine service, notwithstanding the inadequacy of facilities provided for the purpose. The main diseases found were trachoma, favus and ringworm of the scalp, hookworm, and blindness.

Examination for marine licenses, as required by law, was made of applicants aspiring to become deck officers and engineers on vessels of Philippine registry, to insure that they were physically sound particularly as regards eyesight, hearing, and other physical defects which would incapacitate them for service. There were 528 examinations conducted at the various ports of the islands.

Epidemiological news service.—As in 1927, the bureau of quarantine service continued to receive, through the courtesy of the naval station at Los Banos without expense to the government, the information given by the eastern bureau, health section, League of Nations, concerning quarantinable diseases in the Orient. The bureau at Singapore also furnished a weekly report and telegraphic information regarding the presence of diseases and new outbreaks throughout the Orient. This information constituted an invaluable aid to quarantine officers when examining vessels at ports of entry, in addition to the bills of health produced, but especially in the cases of vessels from ports where there were no American consuls.

Very respectfully,

E. A. GILMORE,
Secretary of Public Instruction.

BUREAU OF EDUCATION STATISTICAL TABLES

SCHOOLS AND PUPILS

TABLE 1.—*Annual enrollment and percentage of total population and school population in schools*

Year	Annual enrollment, September	Total population ¹	Percentage of population in public schools ²	School population ³	Percentage of school age population in public schools ²	Enrollment in private schools, July
1924-----	1, 111, 566	11, 238, 593	9.89	2, 957, 524	37.58	67, 576
1925-----	1, 096, 758	11, 406, 875	9.61	3, 001, 809	36.54	⁴ 82, 526
1926-----	1, 061, 525	11, 575, 176	9.17	3, 046, 099	34.85	⁴ 88, 001
1927-----	1, 099, 306	11, 744, 172	9.36	3, 090, 572	35.57	86, 695
1928-----	1, 111, 509	11, 913, 167	9.33	3, 135, 044	35.45	84, 695

¹ The figures for total population by divisions were obtained from the office of vital statistics of the Philippine health service, Manila.

² The percentages for previous years, as given in previous annual reports of the bureau of education, have been revised on the basis of the population data supplied by the Philippine health service.

³ The school population is estimated by dividing the total population by 3.8, which is the ratio of the total population 6-17 years of age to the total population of the islands as reported by the 1918 census.

⁴ December enrollment.

TABLE 2.—*Percentage of attendance for the last 5 school years*

School year	Primary	Intermediate	Secondary	Total
1923-24-----	92.90	94.55	95.45	93.23
1924-25-----	93.82	95.23	96.62	94.17
1925-26-----	94.59	95.37	96.43	94.81
1926-27-----	95.24	96.02	96.72	95.46
1927-28-----	95.85	96.39	97.13	96.02

TABLE 3.—*Percentage of the total enrollment in primary, intermediate, and secondary grades, based on the enrollment for the month of September for each year*

Year	Primary	Inter- mediate	Second- ary	Total
1924.....	80.03	15.54	4.43	100.00
1925.....	78.70	16.29	5.01	100.00
1926.....	77.23	17.18	5.59	100.00
1927.....	76.27	17.92	5.81	100.00
1928.....	75.32	18.34	6.34	100.00

TABLE 4.—*Percentage of enrollment of intermediate pupils, by courses*

Year	Percentage of monthly enrollment for September		
	General	Trade	Farming
1924.....	96.38	1.64	1.98
1925.....	96.56	1.46	1.98
1926.....	96.46	1.25	2.29
1927.....	96.52	1.07	2.41
1928.....	96.86	.86	2.28

NOTE.—The trade course in the elementary schools is being discontinued and the vocational course in the secondary schools strengthened.

TABLE 5.—*Percentage of enrollment of secondary pupils, by courses. Based on the enrollment for September*

Year	General	Normal	Commercial	Trade	Farming	Nautical	Home economics	Surveying
1924.....	73.92	13.29	1.26	2.37	3.87	0.09	5.08	0.12
1925.....	75.26	12.09	1.08	2.63	4.19	.05	4.70	-----
1926.....	73.96	11.93	1.07	3.43	4.51	.06	5.04	-----
1927.....	74.70	11.25	.92	4.08	4.01	.07	4.97	-----
1928.....	72.40	10.32	.80	5.74	4.92	.09	5.73	-----

TABLE 6.—*Percentage of pupils dropped*

School year	Percentage dropped			
	Primary	Inter- mediate	Second- ary	Total
1923-24.....	16.49	14.34	10.19	15.95
1924-25.....	16.25	14.23	9.52	15.63
1925-26.....	15.69	16.16	12.73	15.62
1926-27.....	13.51	12.32	10.49	13.13
1927-28.....	12.71	12.14	8.93	12.39

The median percentage of withdrawals for the islands was 14.32.

TABLE 7.—*Percentage of promotions in the primary, intermediate, and secondary years*

School year	Percentage promoted			
	Primary	Inter- mediate	Second- ary	Total
1923-24.....	71.69	77.33	76.98	72.73
1924-25.....	74.40	81.29	74.41	75.49
1925-26.....	79.63	90.81	82.39	81.61
1926-27 ¹	78.63	88.73	82.40	80.60
1927-28 ¹	79.42	89.70	83.87	81.55

¹ Based on the corrected enrollment.TABLE 8.—*Monthly salaries of Filipino teachers*

Classes of teachers	Lowest	Average	Highest
Municipal elementary teachers.....	25.00	52.56	140.00
Municipal secondary teachers.....	55.00	106.46	150.00
Municipal elementary principals.....	40.00	78.94	250.00
Provincial elementary teachers.....	30.00	78.84	160.00
Provincial secondary teachers.....	46.00	115.58	166.67
Provincial elementary principals.....	45.00	84.74	175.00
Provincial secondary principals.....	110.00	152.67	200.00
Insular elementary teachers.....	25.00	106.50	183.33
Insular secondary teachers.....	75.00	138.64	300.00
Insular elementary principals.....	25.00	103.68	183.33
Insular secondary principals.....	100.00	182.94	333.33
Supervising teachers.....	75.00	129.97	216.67

TABLE 9.—*Schools of agriculture*

	Agri- cultural schools	Farm schools	Settlement farm schools	Grand total
Number of schools.....	14	16	277	307
Number of teachers:				
Americans.....	13			13
Filipinos.....	132	123	600	855
Total annual enrollment.....	3,212	3,157	20,764	27,133
Total provincial and municipal funds expended.....	P169,590.18	P39,360.94	P40,763.32	P249,714.54
Area of site in hectares:				
Cultivated.....	1,440	284	1,195	2,919
Total.....	6,355	590	5,384	12,329
Number of animals:				
Carabaos.....	556	157	225	938
Horses.....	33	4	11	48
Work cattle.....	78	13	54	145
Other cattle.....	570	21	166	757
Hogs.....	780	272	289	1,341
Poultry.....	7,687	3,706	4,259	15,654
Value of school products:				
Animals.....	P35,578.99	P8,455.60	P16,368.08	P60,402.67
Vegetables.....	P22,766.95	P13,036.22	P13,231.61	P49,034.78
Field crops.....	P117,391.60	P12,998.96	P62,911.27	P193,301.83
Fruits.....	P3,911.99	P1,631.87	P12,256.56	P17,800.42
Other products.....	P20,389.48	P10,325.21	P3,923.17	P34,637.86
Total.....	P200,039.01	P46,447.86	P108,690.69	P355,177.56
Value of products from home projects.....	P21,329.49	P28,283.58	P3,435.88	P53,048.95
Total value of products of schools and home projects.....	P221,368.50	P74,731.44	P112,126.57	P408,226.51

TABLE 10.—*Agricultural clubs*

	Number of club members with projects	Value of production from projects of club members	Number of animals
Garden vegetables.....	7,020	P43,005.28	-----
Hogs.....	3,308	73,150.18	9,360
Poultry.....	18,745	218,946.08	254,433
Fruits.....	1,718	8,255.50	-----
Corn—field crops.....	1,369	7,474.42	-----
Cooking.....	5,781	19,568.96	-----
Total.....	36,941	370,400.42	263,793

TABLE 11.—*Industrial production*

	Number of pupils	Total value of production
Embroidery and lace making.....	105,240	P182,054.86
Basketry.....	69,890	84,290.30
Municipal shops.....	18,907	106,678.03
Provincial trade schools.....	4,135	192,774.33
Provincial shops.....	761	16,410.66
Miscellaneous.....	265,684	783,320.85
Total.....	464,617	1,365,529.03

TABLE 12.—*Voluntary contributions*

School year:	Amount
1925-26.....	P1,455,275.84
1926-27.....	1,161,792.90
1927-28.....	784,559.08

TABLE 13.—*Insular funds for school building construction*

	Amount
Elementary school buildings.....	P1,209,500
High school buildings.....	25,000
Normal school buildings.....	100,000
Trade school buildings.....	50,000
Agricultural school buildings.....	210,000
Total.....	1,594,500

TABLE 14.—*Distribution of the P100,000 allotted in Act No. 3377, subsection (a) of section 2 for buildings*

Provinces:	Amount	Provinces:	Amount
Abra.....	P973.50	Mountain.....	P1,947.00
Batanes.....	4,447.00	Oriental Negros.....	9,734.50
Batangas.....	973.50	Pampanga.....	3,407.10
Bulacan.....	9,734.50	Samar.....	1,947.00
Camarines Sur.....	6,173.00	Sulu.....	10,221.20
Cebu.....	24,336.00	Union.....	1,947.00
Iloilo.....	10,707.90	Zambales.....	3,407.10
Isabela.....	10,043.70		

TABLE 15.—*Governmental expenditures for school purposes*

Year	Total expenditures	Per cent of increase or decrease	Expenditures per capita ¹	Expenditures per pupil ²
1923.....	P22, 202, 532. 49	-----	P2. 01	P19. 97
1924.....	24, 529, 540. 55	+10. 48	2. 18	22. 07
1925.....	24, 148, 485. 49	-1. 58	2. 12	22. 02
1926.....	25, 424, 434. 32	+5. 28	2. 20	23. 95
1927.....	27, 619, 506. 82	+8. 63	2. 35	25. 12

¹ Expenditures per capita are figured on the basis of the total population estimates as supplied by the Philippine health service.

² Expenditures per pupil are figured on the basis of the annual enrollment for September.

TABLE 16.—*Governmental expenditures for all purposes and the amount and percentage spent for school purposes in 1927*

Government	Expenditures	Expenditures for school purposes	Percentages which school expenditures were of total expenditures
Insular.....	P62, 743, 468. 35	P17, 945, 183. 18	28. 60
Provincial.....	35, 777, 438. 75	3, 995, 459. 19	11. 17
Municipal.....	19, 273, 690. 04	5, 678, 864. 45	29. 46
Total.....	117, 794, 597. 14	27, 619, 506. 82	23. 45

TABLE 17.—*Classification of insular, provincial, and municipal school expenditures in 1927*

Expenditures	Insular	Provincial	Municipal	Total
Aid to Provinces and municipalities.....	P11, 607, 961. 87	-----	-----	P11, 607, 961. 87
Salaries.....	4, 195, 947. 67	P2, 341, 027. 49	P1, 573, 119. 98	8, 110, 095. 14
Outlay.....	104, 924. 99	519, 666. 87	2, 368, 309. 78	2, 992, 901. 64
Other expenses.....	2, 036, 343. 65	1, 134, 764. 83	1, 737, 434. 09	4, 908, 548. 17
Total.....	17, 945, 183. 18	3, 995, 459. 19	5, 678, 864. 45	27, 719, 506. 82
Percentage of total expenditures for school purposes.....	64. 97	14. 47	20. 56	100. 00

TABLE 18.—*School expenditures from all government sources*

Government	Expenditures, 1926	Expenditures, 1927	Percentage of increase
Insular.....	P16, 295, 895. 30	P17, 945, 183. 18	10. 15
Provincial.....	3, 563, 253. 10	3, 995, 459. 19	12. 13
Municipal.....	5, 569, 286. 92	5, 678, 864. 45	1. 97
Total.....	25, 424, 434. 32	27, 619, 506. 82	8. 63

TABLE 19.—*Secondary courses offered (September)*

	Number	
	1927	1928
Length of courses:		
Complete 4-year courses.....	75	84
3-year courses.....	14	15
2-year courses.....	14	10
1-year course.....	10	17
Combination of courses:		
General course only.....	44	42
Agricultural course only.....	17	24
Trade course only.....	19	23
Normal course only.....	8	8
Nautical course only.....	1	1
Commercial course only.....	1	1
Home economics course only.....	1	1
General normal courses.....	4	6
General and home economics courses.....	6	7
Normal, home economics, and trade courses.....	1	1
Home economics and trade courses.....	1	2
General, normal, and home economics courses.....	3	3
Home economics and agricultural courses.....	5	6
General, normal, home economics, and commercial courses.....	1	1
Home economics and normal courses.....	1	1

¹ Cabugao rural high school (Mountain Province) to be opened Nov. 1, 1928, not included.

TABLE 20.—*Promotions of elementary pupils*

School year	Number of pupils promoted	March monthly enrollment	Percentage of pupils promoted
1923-24.....	663,849	914,967	73
1924-25.....	686,400	908,579	76
1925-26.....	723,932	887,637	82
1926-27.....	722,617	878,420	82
1927-28.....	760,678	915,201	83

TABLE 21.—*Promotions of secondary students*

School year	Students promoted	March monthly enrollment	Percentage promoted based on March monthly enrollment
1923-24.....	28,552	37,091	77
1924-25.....	33,490	45,009	74
1925-26.....	39,655	48,133	82
1926-27.....	43,737	52,998	83
1927-28.....	49,219	58,503	84

TABLE 22.—*Per cent of pupils withdrawing from elementary and secondary grades*

School year	Per cent withdrawal		
	Elementary	Secondary	Total
1923-24.....	16.18	10.19	15.96
1924-25.....	15.92	9.52	15.64
1925-26.....	15.77	12.73	15.62
1926-27.....	13.29	10.49	13.13
1927-28.....	12.60	8.93	12.39

TABLE 23.—*Enrollment and promotion in the bureau of education vacation normal schools in 1927 and 1928*

School	Total enrollment		Enrollment by subjects at the beginning of the term		Enrollment by subjects at the end of the term		Promotions by subjects		Percentage of promotion by subjects	
	1927	1928	1927	1928	1927	1928	1927	1928	1927	1928
P. N. S. vacation normal school	616	1,134	1,178	2,205	1,065	1,962	875	1,734	82.16	88.00
Baguio vacation normal school	345	970	807	2,017	595	1,878	569	1,691	95.63	90.00
Cebu vacation normal school	1,131	1,145	2,237	2,555	1,983	2,342	1,673	2,173	84.37	92.78
Zamboanga vacation normal school		395		1,011		969		852		88.00
Total	2,192	3,644	4,222	7,788	3,643	7,151	3,117	6,450	85.56	90.01

TABLE 24.—*Teacher replacement during the years 1927 and 1928*

	In service		Separated		Per cent of replacement	
	1927	1928	1927	1928	1927	1928
Insular	1,659	1,677	193	208	11.63	11.77
Provincial	840	1,010	232	237	27.62	23.47
Municipal	22,767	23,094	4,764	4,974	20.93	21.54
Total	25,266	25,871	5,189	5,419	20.54	20.95

TABLE 25.—*Professional training of teachers in all secondary schools, 1927 and 1928*

	1927	1928	Increase (+), decrease (-)
Total number of secondary teachers	1,185	1,330	+145
Number who are graduates in education	373	535	+162
Number who are graduates in liberal arts	1,177	286	-91
Per cent of secondary teachers who are graduates in education or liberal arts	46.41	46.69	+ .28

¹ Insular and provincial only.

² Includes 7 secondary principals.

TABLE 26.—*Per cent of English classes taught by American and Filipino teachers in each type of secondary schools*

Year	Normal		Academic high		H. E.		Trade		Agricultural and rural high		Total	
	American	Filipino	American	Filipino	American	Filipino	American	Filipino	American	Filipino	American	Filipino
First	84.44	15.56	18.03	81.97	17.95	82.05	30.77	69.23	16.67	83.33	23.70	76.30
Second	100.00		34.88	65.12	36.00	64.00	48.39	51.61	17.39	82.61	41.05	58.95
Third	100.00		61.83	38.17	57.14	42.86	52.63	47.37	12.50	87.50	62.65	37.35
Fourth	100.00		81.42	18.58	84.62	15.38	53.85	46.15	9.09	90.91	79.37	20.63
Total	92.86	7.14	34.52	65.48	33.58	66.42	38.32	61.68	15.57	84.43	38.76	61.24

TABLE 27.—*Educational qualifications of critic teachers in normal schools*

	1926	1927	1928
1. Number who are college of education or United States normal school graduates.....	7	7	7
2. Number with three years of training in a college of education.....		1	3
3. Number having complete Philippine Normal School or equivalent training.....	63	112	133
4. Number having complete provincial normal or equivalent training.....	19	15	8
5. Number of graduates of general course high schools, trade schools, and undergraduates with in-service training and successful experience in teaching.....	44	17	15
Total.....	138	152	166
Percentage of normal and college of education graduates.....	66.9	88.8	90.9
Percentage of college of education and Philippine Normal School graduates.....	52.6	78.9	86.1

TABLE 28.—*Teaching experience of Filipino classroom teachers (including principals) on August 1, 1928*

Experience, in years	Elementary	Secondary	Total	Percentage
Less than 1 year.....	3,881	239	4,120	17.10
1 year.....	3,325	200	3,525	14.63
2 years.....	2,426	175	2,601	10.79
3 years.....	2,006	109	2,115	8.78
4 years.....	1,791	115	1,906	7.91
5 years.....	1,415	96	1,511	6.27
6 years.....	1,262	61	1,323	5.49
7 years.....	1,199	64	1,263	5.24
8 years.....	1,070	69	1,139	4.73
9 years.....	850	36	886	3.68
10 years.....	709	30	739	3.06
11 to 14 years.....	1,712	78	1,790	7.43
Over 14 years.....	1,114	65	1,179	4.89
Total.....	22,760	1,337	24,097	100.00
Median.....	3.87	3.50	3.85	-----

OFFICE OF THE COMMISSIONER OF PRIVATE EDUCATION—STATISTICAL TABLES

TABLE I (A).—*Schools classified by religious denominations, 1928–29*

Course	Denomination			
	Catholic	Protestant	Nonsectarian	Total
Number of schools (counted by courses):				
Primary.....	164	2	21	184
Intermediate.....	110	3	41	154
Secondary.....	69	5	121	195
College cultural.....	16	7	9	32
Technical ¹	12	6	22	40
Miscellaneous ²	7	2	4	13
Total.....	378	25	218	621
Enrollment:				
Primary grades.....	27,617	110	2,558	30,285
Intermediate grades.....	9,509	185	3,102	12,796
Secondary grades.....	7,634	1,089	21,095	29,818
College cultural courses.....	972	449	2,566	3,987
Technical schools.....	2,124	357	5,019	7,500
Miscellaneous.....	179	18	230	427
Total.....	48,035	2,208	34,570	84,813

¹ Nursing schools have been included in the technical schools.² The special courses such as music course, etc., have been classified as miscellaneous courses.

TABLE 1 (B).—*Schools classified by religious denominations, 1927-28*

Course	Denomination			
	Catholic	Protes- tant	Nonsec- tarian	Total
Number of schools (counted by courses):				
Primary.....	178	6	25	209
Intermediate.....	124	10	50	184
Secondary.....	77	13	110	200
College cultural.....	16	4	10	30
Technical.....	13	7	26	46
Miscellaneous.....	7	1	15	23
Total.....	415	41	236	692
Enrollment:				
Primary grades.....	30,635	378	2,937	33,950
Intermediate grades.....	9,484	570	4,123	14,177
Secondary grades.....	7,119	1,738	20,562	29,419
College cultural courses.....	941	322	1,134	2,397
Technical schools.....	1,530	329	3,602	5,461
Miscellaneous.....	108	14	1,169	1,291
Total.....	49,817	3,351	33,527	86,695

TABLE II.—*Number of schools (counted by courses)*

Kind of course	1927-28	1928-29	Increase (+) de- crease (-)	Percent- age
Primary.....	209	187	-22	-11
Intermediate.....	184	154	-30	-16
Secondary.....	200	195	-5	-3
College cultural.....	30	32	+2	+7
Technical.....	46	40	-6	-13
Miscellaneous courses.....	23	13	-10	-44
Total.....	692	621	-71	-----

TABLE III.—*Enrollment*

Kind of school	1927-28	1928-29	Increase (+) de- crease (-)	Percent- age
Primary grades.....	33,950	30,285	-3,665	-11
Intermediate grades.....	14,177	12,796	-1,381	-10
Secondary grades.....	29,419	29,818	+399	+1
College cultural courses.....	2,397	3,987	+1,590	+66
Technical schools.....	5,461	7,500	+2,039	+37
Miscellaneous (enrollment).....	1,291	427	-864	-67
Total.....	86,695	84,813	-1,882	-----

Enrollment in summer sessions (secondary), 1928

National University:

Teachers.....	805
Repeaters.....	200

Comparative total enrollment and enrollment per secondary course in recognized private schools for the last three years

Year	Total enrollment	Per secondary enrollment
1926.....	88,001	139
1927.....	86,695	147
1928.....	84,813	153

TABLE IV.—*Number of schools visited*

Once		Twice		Three times		Four times		More than four times	
1927	1928	1927	1928	1927	1928	1927	1928	1927	1928
61	67	86	73	52	63	28	48	101	82

NOTE.—The following schools, in addition to some of the nursing schools, were not visited during 1928: Catholic Parochial School of Cotabato, Cotabato, Cotabato; Stella Maris School, Lubang, Mindoro; Ifugao Academy, Ifugao, Mountain Province; St. Joseph School of Cuyo, Palawan; Pacific Institute, Infanta, Tayabas; Dr. St. Buenaventura Academy, Mauban, Tayabas. It was found impossible for the office, with the limited travel appropriations available during 1928, to have the first five of these schools visited. The last-named school is being visited early in 1929. Not much has been done with the nursing schools during 1928, as the minimum standards have been for over a year in the process of revision by a special committee, and it is considered of little value to have these schools inspected with a view to determine whether or not they meet the established standards until these standards are determined upon. All of these nursing schools have, however, been inspected to determine whether or not the newly admitted pupils were qualified for enrollment.

TABLE V.—*Permits issued during 1928*

To new schools:	
1926.....	44
1927.....	31
1928.....	14
To old schools:	
1926.....	76
1927.....	50
1928.....	68

NOTE.—Actual number of permits issued counted; new branch schools considered as new.

TABLE VI.—*Corporate authorities granted during 1928*

To new schools:	
1926.....	None.
1927.....	None.
1928.....	1
To old schools:	
1926.....	None.
1927.....	7
1928.....	3

NOTE.—Actual number of corporate authorities granted counted.

TABLE VII.—*Library*

	Decem- ber, 1927	Decem- ber, 1928	Increase	Decrease	Per cent of differ- ence, in- crease (+), de- crease (-)
Reference books.....	41, 242	61, 069	19, 827	-----	+48
Library books.....	153, 586	132, 663	-----	20, 923	-14
Total.....	194, 828	193, 732	19, 827	20, 923	-1
Separate subscription to periodicals.....	3, 049	9, 465	6, 416	-----	+68

NOTE.—No report has as yet been received from Immaculate Virgin School, Ibaan, Batangas, and Holy Child School, Marihatag, Surigao.

TABLE VIII

A. Qualifications of faculty

	Decem- ber, 1927	Decem- ber, 1928	Increase	Decrease	Per cent of differ- ence, in- crease (+), de- crease (-)
1. Number of fully qualified instructors:					
Primary.....	604	555	-----	49	-8
Intermediate.....	690	552	-----	138	-20
Secondary.....	877	686	-----	191	-22
	2, 171	1, 793	-----	378	-17
2. Number of instructors having certificates of eligi- bility:					
Primary.....	304	213	-----	91	-30
Intermediate.....	79	62	-----	17	-22
Secondary.....	269	250	-----	19	-7
	652	525	-----	127	-19
3. Number of instructors not coming under 1 and 2, above:					
Primary.....	-----	86	86	-----	+100
Intermediate.....	-----	42	42	-----	+100
Secondary.....	-----	94	94	-----	+100
	-----	222	222	-----	+100

B. Status of instructors

	Decem- ber, 1927	Decem- ber, 1928	Increase	Decrease	Per cent of differ- ence in- crease (+), de- crease (-)
1. Number of part-time instructors:					
Primary.....	144	118	-----	26	-18
Intermediate.....	253	175	-----	78	-31
Secondary.....	326	282	-----	44	-13
Collegiate.....	356	242	-----	114	-32
Technical.....	395	272	-----	123	-31
Special.....	94	13	-----	81	-86
	¹ 1, 568	1, 102	-----	466	-30
2. Number of full-time instructors:					
Primary.....	736	736	-----	-----	-----
Intermediate.....	519	481	-----	38	-7
Secondary.....	783	748	-----	35	-4
Collegiate.....	228	132	-----	96	-42
Technical.....	54	67	13	-----	+24
Special.....	28	18	-----	10	-36
	2, 348	2, 182	13	179	-8

¹ The above figures for 1927 are not entirely accurate, as many schools having both secondary and college departments reported the same instructors under both headings.

C. Length of service of instructors

	Newly appointed in the school during 1928	Now employed in the school and appointed before 1928	Total
Primary.....	281	573	854
Intermediate.....	242	414	656
Secondary.....	407	623	1,030
Collegiate.....	83	291	374
Technical.....	79	248	327
Special.....	7	24	31
	1,099	2,173	3,272

NOTE.—No report has as yet been received from Immaculate Virgin School, Ibaan, Batangas, and Holy Child School, Marikhatag, Surigao.

TABLE IX.—*Cancellations of recognition issued during the period from January 1 to December 31, 1928*

[Those issued during 1926 and 1927 are included for comparison]

	1926	1927	1928
A. Affecting entire school:			
(a) For failure to meet requirements.....		14	13
(b) Voluntary.....	10	6	6
(c) Through failure to operate.....	1	10	9
(d) Miscellaneous reasons.....			1
Total.....	11	30	29
B. Affecting separate grades, years, or courses only:			
(a) For failure to meet requirements.....		5	16
(b) Voluntary.....	22	4	10
(c) Through failure to operate.....	2	17	17
Total.....	24	26	43
Grand total.....	35	56	72

NOTE.—The above figures show the number of cancellations made. In some schools more than one cancellation was made during the same period.

Cancellation of permits, January 1 to December 31, 1928

	1926	1927	1928
(a) For failure to meet requirements.....	3	12	13
(b) Voluntary.....	17	2	6
(c) Through failure to operate.....	10	20	4
Total.....	30	34	23

PHILIPPINE HEALTH SERVICE STATISTICAL TABLES

TABLE 1.—*Showing the number of medical personnel*

Rank and assignment	1927	1928
Director of health.....	1	1
Chiefs of divisions.....	4	5
District inspectors.....	4	5
Senior medical inspectors.....	22	20
Medical inspectors.....	23	23
Senior surgeons.....	29	31
Surgeons.....	25	29
Assistant surgeons.....	10	8
Chiefs of hospitals or resident physicians (not assistant surgeons nor in the commissioned service).....	17	23
Presidents of sanitary divisions.....	283	289
Assistant and assistant to district health officers (not in the commissioned service).....	5	8
Physicians:		
Modern leprosy treatment and clinical investigation, Cullion leper colony.....	16	17
Malaria control (not in the commissioned service).....	5	4
Supernumerary physicians (not in the commissioned service).....	(1)	2
Total.....	444	465

¹ Those in 1927, five in number, were counted as presidents of sanitary divisions, for they served as such.

TABLE 2.—*Showing the number of nonmedical personnel*

Classification	1927	1928
Sanitary inspectors.....	1,454	1,468
Dispensary attendant—sanitary inspectors.....	76	86
Vaccinators.....	150	148
Nurses.....	305	341
Clerks.....	220	235
Total.....	2,205	2,278

TABLE 3.—*Showing the number of personnel (insular force)*

Specification	1927	1928
Probational.....	69	48
Temporary.....	96	125
Reinstatement and transfer to this service.....	25	28
Total.....	190	201

TABLE 4.—*Showing the number of separations (insular force)*

Specification	1927	1928
Resignations.....	54	49
Honorable discharge.....	1	1
Dismissed or dropped.....	11	3
Transfers from this service.....	18	17
Died.....	0	4
Left.....	0	0
Services dispensed with.....	17	5
Retired.....	13	13
Total.....	104	82

¹ Excludes 10 pensionaries of provincial status.

² Excludes 8 pensionaries of provincial status.

TABLE 5.—Showing the estimated population in all Philippines during the year 1928

Province	Estimated Christian population as of July 1	Estimated Christian and non-Christian population combined
Manila.....	324,522	324,522
Provinces.....	10,482,045	11,588,645
Total.....	10,806,567	11,913,167

TABLE 6.—Showing the vital returns in the Provinces for the year 1928

Provinces	Estimated population as of July 1		Total marriages reported	Total births reported	Total deaths from all causes	Infant mortality	Returns up to—
	Christian alone	Christian and non-Christian combined					
Abra.....	61,755	85,252	234	1,970	1,259	199	November.
Agusan.....	53,501	56,645	197	943	516	155	October.
Albay.....	291,747	291,747	1,440	7,977	3,188	920	August.
Antique.....	168,426	168,426	1,033	5,459	2,651	520	November.
Bataan.....	64,909	65,271	480	2,381	1,502	546	Do.
Batanes.....	8,214	8,214	21	176	118	16	September.
Batangas.....	389,686	389,690	2,408	11,640	6,060	2,091	October.
Bohol.....	411,885	411,885	2,324	12,330	5,783	1,671	September.
Bukidnon.....	10,110	48,544	54	472	227	60	October.
Bulacan.....	263,749	264,621	2,121	9,038	5,344	2,014	November.
Capayan.....	208,114	210,462	1,432	8,145	4,737	1,513	October.
Camarines Norte.....	58,800	58,904	313	2,102	915	246	Do.
Camarines Sur.....	230,324	230,756	1,915	9,555	4,641	1,425	Do.
Capiz.....	319,724	329,830	1,307	8,400	4,518	1,123	September.
Catanduanes.....	81,751	81,751	450	2,990	1,050	299	October.
Cavite.....	170,889	170,899	1,115	6,020	3,464	1,240	November.
Cebu.....	975,868	975,868	6,032	32,394	12,977	3,506	October.
Cotabato.....	10,744	199,629	42	425	200	67	September.
Davao.....	72,874	133,858	224	1,215	752	196	Do.
Ilocos Norte.....	241,782	243,209	901	5,555	2,932	657	October.
Ilocos Sur.....	235,081	235,402	948	5,559	2,972	798	Do.
Iloilo.....	550,850	558,530	2,802	15,988	8,240	2,057	Do.
Isabela.....	133,137	134,877	862	5,067	3,298	910	November.
Laguna.....	223,699	223,710	1,581	7,504	4,350	1,423	Do.
Lanao.....	10,346	121,469	55	377	189	62	October.
La Union.....	179,839	179,839	948	5,849	2,724	652	November.
Leyte.....	723,367	723,367	3,993	19,317	9,995	2,652	September.
Marinduque.....	59,978	59,984	332	2,596	1,363	401	November.
Masbate.....	81,815	81,815	522	2,097	686	192	October.
Mindoro.....	77,873	91,340	390	2,443	1,780	437	Do.
Misamis.....	232,765	237,763	1,395	9,177	9,577	1,440	September.
Mountain Province.....	66,733	332,083	138	2,645	1,796	311	Do.
Nueva Ecija.....	281,819	282,865	2,203	9,272	5,647	2,298	October.
Nueva Vizcaya.....	27,384	35,838	310	1,631	1,322	388	Do.
Occidental Negros.....	443,408	449,655	2,891	15,876	9,446	2,389	Do.
Oriental Negros.....	316,577	316,577	1,425	9,030	4,562	1,327	Do.
Palawan.....	55,740	89,067	173	795	304	48	July.
Pampanga.....	276,079	277,940	2,016	11,085	5,498	2,165	November.
Pangasinan.....	645,088	645,194	4,352	25,428	14,384	4,531	Do.
Rizal.....	278,528	278,528	1,888	8,326	5,520	1,614	Do.
Romblon.....	71,669	71,669	377	2,209	1,221	313	October.
Samar.....	447,989	447,989	2,465	12,375	5,231	1,466	Do.
Sorsogon.....	213,232	213,232	1,094	7,300	3,281	910	Do.
Sulu.....	4,958	222,088	27	156	73	26	November.
Surigao.....	139,739	141,332	692	2,775	1,912	466	September.
Tarlac.....	190,461	193,938	1,354	8,311	4,694	1,768	November.
Tayabas.....	246,490	247,388	1,962	9,168	5,068	1,605	October.
Zambales.....	90,716	92,810	468	2,841	2,159	495	Do.
Zamboanga.....	81,833	176,885	632	3,180	1,142	325	Do.
City of Baguio.....			54	156	140	38	November.
Culion Leper Colony.....			3	77	244	9	September.

TABLE 7.—*Showing the vital returns from the Provinces during 1928*

Up to and including	Number of Provinces	Christian population	Marriages	Births	Total deaths	Infant mortality
July.....	1	55,740	173	795	304	48
August.....	1	291,747	1,440	7,977	3,188	920
September.....	9	1,986,045	10,139	56,537	29,895	7,951
October.....	24	5,427,018	32,246	172,942	87,001	25,831
November.....	14	2,721,495	18,397	99,346	56,264	18,047

TABLE 8.—*Showing the various rates for all Philippines during 1928 as compared with those of previous years*

Years	Estimated population		Rates per 1,000 Christian population			Infant mortality per 1,000 births
	Christian alone	Christian and non-Christian	Marriages	Births	Deaths ¹	
Average of 5 years ending—						
1924.....	9,906,435	10,714,784	14.80	37.39	21.03	159.16
1925.....	10,356,502	11,401,701	16.45	37.42	19.94	150.18
1926.....	10,506,525	11,575,176	16.52	38.11	21.89	156.74
1927.....	10,656,545	11,744,172	17.49	38.88	20.68	152.54
1928 ²	10,806,567	11,913,167	14.07	38.90	20.21	154.94

¹ Includes transient residents of Manila and those with unknown residence.² Expected figures (returns from Provinces not yet complete).TABLE 9.—*Showing the various rates for the provinces during 1928 in comparison with those of previous years*

Years	Estimated population		Rates per 1,000 Christian population			Infant mortality per 1,000 births
	Christian alone	Christian and non-Christian	Marriages	Births	Deaths ¹	
Average of 5 years ending—						
1924.....	9,606,683	10,600,071	14.66	37.17	20.88	157.46
1925.....	10,044,364	11,089,563	16.40	37.09	19.69	149.50
1926.....	10,190,259	11,258,910	16.45	37.84	21.75	156.37
1927.....	10,336,151	11,423,778	17.50	38.60	20.57	152.62
1928 ²	10,482,045	11,588,645	14.26	38.60	20.12	155.08

¹ Includes transient residents in Manila.² Expected figures (reports not yet complete).TABLE 10.—*Showing the various rates for the city of Manila during 1928 as compared with those of previous years*

Years	Estimated population	Rates per 1,000 population			Infant mortality per 1,000 births
		Marriages	Births	Deaths	
Average of 5 years ending December—					
1924.....	299,754	19.33	44.39	25.77	201.98
1925.....	312,138	18.17	48.20	23.87	167.02
1926.....	316,266	18.76	46.84	26.37	166.27
1927.....	320,394	17.39	48.02	24.21	150.33
1928.....	324,522	8.05	48.41	23.06	151.38

TABLE 11.—Showing the number and result of the inspection of factories

Kind of establishment	Num-ber	Average number of in-spections	Total number of in-spections	Total number of laborers
Auto repair.....	26	Once a month.....	192	1, 152
Box factories.....	28	do.....	81	177
Bicycle repair.....	12	do.....	100	30
Brick manufacturers.....	2	do.....	24	90
Batteries, charging.....	4	do.....	54	24
Candle factories.....	2	do.....	4	21
Carriage factories.....	26	do.....	113	306
Dormitories.....	90	Twice a year.....	110	-----
Embroideries.....	17	Once a month.....	120	905
Firewood deposits.....	18	do.....	199	44
Fertilizer.....	2	do.....	3	90
Foundries.....	42	do.....	522	789
Furniture.....	105	do.....	1, 158	1, 479
Hat factories.....	60	do.....	407	403
Ink factories.....	2	do.....	10	6
Kapok industry.....	1	do.....	3	30
Lumber yards.....	48	do.....	451	964
Lumbang oil.....	1	do.....	12	4
Lye manufacturer.....	1	do.....	6	2
Machinery.....	18	do.....	111	240
Match factory.....	1	do.....	4	240
Manufacture of polish metal.....	1	do.....	12	3
Nickle plating.....	6	do.....	50	70
Nail, manufacture and sale.....	4	do.....	32	19
Oil mills.....	7	do.....	150	1, 221
Oxy-acetylene welding.....	9	do.....	51	85
Photography.....	36	do.....	74	226
Printing press.....	58	do.....	900	1, 431
Rice mills.....	2	do.....	37	26
Rope factories.....	3	do.....	5	390
Secondhand stores.....	114	do.....	837	274
Storage of gasoline.....	4	do.....	14	1, 060
Slipper factories.....	159	do.....	1, 178	895
Shoe factories.....	50	do.....	323	345
Sharpening instruments.....	5	do.....	35	20
Shipyards.....	3	do.....	15	112
Silversmith.....	119	do.....	792	287
Sewing empty sacks.....	2	do.....	3	30
Soap factories.....	8	do.....	19	41
Shirt factories.....	16	do.....	336	471
Tobacco factories.....	54	Once every two weeks.....	1, 711	9, 029
Rizal.....	21	do.....	-----	-----
Bulacan.....	3	do.....	-----	-----
Tinsmiths.....	53	Once a year.....	372	196
Umbrella factories.....	4	do.....	19	146
Watch repairing.....	56	do.....	476	94
Vulcanizing plant.....	3	do.....	16	12
Total.....	1, 306	-----	11, 131	23, 478

TABLE 12.—Showing report on school medical inspection received from 20 Provinces

Total number of children examined.....	134, 541
Total number of children excluded from schools.....	5, 546
Total number of children treated:	
In dispensaries.....	22, 915
In the homes.....	10, 090
Defects registered:	
Smallpox or varioloid.....	1
Varicella.....	3
Measles.....	9
Whooping cough.....	42
Mumps.....	5
Tuberculosis.....	3
Other dangerous communicable diseases.....	31
Trachoma.....	6, 196
Acute conjunctivitis.....	2, 490
Scabies.....	4, 780
Pediculosis.....	2, 892
Favus and other contagious diseases.....	1, 954

Myopia.....	16
Other eye diseases.....	688
Adenoids.....	104
Tonsils hypertrophied.....	11, 692
Dental caries.....	23, 605
Other diseases.....	9, 354

TABLE 13.—*Showing school medical inspection in Manila during 1928*

Number of schools.....	50
Enrollment.....	61, 322
Number of school physicians.....	3
Number of nurses.....	14
Number of clinics.....	7
Number of pupils given complete physical examination.....	42, 334
Number of pupils examined in rapid class inspection.....	10, 452

TABLE 14.—*Showing the most common diseases encountered in the physical examination of school children*

Defects or diseases	Primary	Intermediate	Secondary
	<i>Percentage</i>	<i>Percentage</i>	<i>Percentage</i>
Dental caries.....	52.0	55.0	45.0
Malnutrition.....	28.7	29.0	-----
Fol. conjunctivitis.....	14.0	20.5	5.4
Skin diseases.....	10.0	15.6	1.4
Respiratory tract.....	5.0	10.2	4.0
Anemia secondary.....	5.6	4.2	2.1
Trachoma.....	2.0	1.3	.4
Defective vision.....	.5	3.4	2.0

TABLE 15.—*Showing the result of the examination of samples of water, milk, and milk products*

Health districts	Water				Milk				Ice cream			
	Num- ber of sam- ples	Bacterial count		Posi- tive— Pre- sump- tive test	Num- ber of sam- ples	Bacterial count		Posi- tive— Pre- sump- tive test	Num- ber of sam- ples	Bacterial count		Posi- tive— Pre- sump- tive test
		Under 500	Over 500			Under 500,000	Over 500,000			Under 500,000	Over 500,000	
No. 1 (Meisic)...	863	603	260	146	229	195	34	38	727	510	217	334
No. 2 (Sampaloc)...	2, 171	1, 163	1, 008	490	355	340	15	15	467	326	141	135
No. 3 (Paco).....	1, 462	1, 019	443	331	337	330	7	4	219	178	41	98
Food inspection.....	-----	-----	-----	-----	78	58	20	26	85	76	9	16
Total.....	4, 496	2, 785	1, 711	967	999	923	76	83	1, 498	1, 090	408	583

TABLE 16.—*Showing the amount of work handled during 1928 on sanitary engineering activities, as compared with those of the six years*

Specifications	1922	1923	1924	1925	1926	1927	Total or average work of 6 years ending 1927	1928
Sanitary orders:								
Issued.....	373	477	602	620	812	354	3,232	580
Completed.....	460	410	492	441	651	433	2,887	301
Canceled.....	103	19	47	36	34	62	301	98
Building plans approved.....	1,952	1,195	1,163	1,194	1,299	1,335	8,138	1,529
Buildings completed.....	744	614	625	802	993	782	4,560	749
Permits for minor buildings constructions:								
Approved.....	1,054	1,132	1,053	1,429	1,194	1,415	7,277	1,543
Disapproved.....	183	218	277	363	166	203	1,410	316
Permits for light and mixed material structures:								
Approved.....	353	653	949	1,318	953	614	4,840	1,064
Disapproved.....	105	182	335	327	229	127	1,305	325
Plumbing:								
Permits issued.....	1,506	1,537	1,757	2,370	1,877	1,820	10,867	1,925
Projects completed.....	1,486	1,296	1,397	2,112	1,709	1,748	9,748	1,695
Premises connected to the sanitary sewer.....	287	250	289	252	233	228	1,539	194
Blue-print copies made from various tracings.....	444	662	1,035	761	946	776	4,624	930
Prosecutions:								
Convictions.....	30	7	10	9	9	9	74	3
Dismissals.....	16	6	8	44	76	79	229	49
Amount of fines.....	P319	P80	P140	P90	P67	P67	P763	P26

TABLE 17.—*Showing the number of plumbing fixtures installed during 1928 as compared with that during 1927*

Plumbing fixtures	1927	1928	Plumbing fixtures	1927	1928
Water-closets.....	1,863	1,899	Gas heaters.....	2	8
Shower heads.....	1,587	1,648	Sit bath.....	—	—
Urinals.....	122	122	Dental washbasins.....	—	—
Faucets.....	3,712	3,695	Hot-water boilers.....	3	—
Washbasins.....	1,042	1,009	Water tanks.....	—	—
Bathtubs.....	193	139	Hose bibs.....	4	2
Kitchen sinks.....	878	1,037	Fire hydrants.....	14	—
Grease traps.....	89	83	Total.....	11,813	12,010
Floor drains.....	2,071	2,107	Miscellaneous:		
Biddets.....	53	57	Sewer connections.....	228	194
Garage traps.....	67	75	Septic vaults.....	174	213
Slop sinks.....	15	23	Water meters.....	1,538	1,577
Dental cuspidors.....	15	7	Total.....	1,940	1,984
Water heaters.....	41	56			
Filters.....	41	42			
Foot baths.....	1	1			

TABLE 18.—*Showing the number of cases and deaths of typhoid fever*

Year	Manila		Provinces ¹		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Average of 5 years, 1918-1922.....	724	229	(²)	2,912	(²)	³ 3,198
1923.....	1,057	270	(²)	1,752	(²)	2,022
1924.....	745	215	2,417	1,706	3,162	1,921
1925.....	587	171	2,294	1,639	2,881	1,810
1926.....	350	92	1,914	1,411	2,264	1,503
1927.....	395	103	1,824	1,334	2,219	1,437
1928 ⁴	619	186	1,818	1,191	2,437	1,377

¹ Includes transient residents in Manila.² Data not available.³ Includes deaths with unknown residence.⁴ Incomplete.

TABLE 19.—*Showing the number of dysentery cases and deaths*

Year	Manila		Provinces ¹		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Average of 5 years, 1918-1922.....	(²)	327	(²)	11, 278	-----	³ 11, 641
1923.....	224	115	(²)	7, 051	(²)	7, 166
1924.....	239	147	16, 304	8, 366	16, 543	8, 453
1925.....	195	124	8, 999	4, 801	9, 194	4, 925
1926.....	494	266	16, 554	9, 073	17, 048	9, 339
1927.....	422	242	15, 204	6, 285	15, 626	6, 527
1928 ⁴	240	132	9, 893	3, 863	10, 133	3, 995

¹ Includes transient residents registered in Manila.² Data not available.³ Includes deaths with unknown residence.⁴ Incomplete.TABLE 20.—*Showing the number of cases and deaths of smallpox and varioloid in the Philippines*

Year	Manila		Provinces ¹		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Average of 5 years, 1918-1922.....	273	177	(²)	14, 490	(²)	³ 14, 698
1923.....	0	0	0	4	(²)	4
1924.....	2	1	73	0	75	1
1925.....	⁴ 1	⁴ 1	19	0	20	1
1926.....	0	0	50	7	30	7
1927.....	0	0	⁵ 1	0	⁵ 1	0
1928.....	0	0	⁶ 5	0	5	0

¹ Includes foreign and transient cases.² Data omitted not very reliable.³ Includes deaths of unknown residence.⁴ Infected by a Chinese case.⁵ Case from Singapore, discovered in Cebu on board the S. S. Lancaster.⁶ 3 cases in Abulog, Cagayan, and 2 cases in Capiz.TABLE 21.—*Showing the number of cases and deaths of measles in Manila and in Provinces, by years*

Year	Manila		Provinces ¹		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
1922.....	154	9	(²)	1, 009	(²)	1, 017
1923.....	276	18	2, 763	518	3, 039	536
1924.....	248	24	3, 496	749	3, 744	773
1925.....	114	3	1, 998	420	2, 112	423
1926.....	239	15	7, 794	2, 892	8, 033	2, 907
1927.....	204	20	4, 352	949	4, 556	969
1928 ³	110	12	1, 897	438	2, 007	450

¹ Includes transient residents reported in Manila.² Data not available.³ Incomplete.

TABLE 22.—*Showing the number of cases and deaths of influenza in Manila and in Provinces*

Year	Manila		Provinces ¹		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
1922.....	213	39	(²)	2,871	(²)	2,910
1923.....	291	46	10,371	5,693	10,662	3,739
1924.....	359	101	18,171	6,633	18,530	6,734
1925.....	312	90	14,962	5,008	15,274	5,098
1926.....	265	74	13,040	6,209	13,305	6,283
1927.....	263	49	15,822	7,034	16,085	7,083
1928 ³	198	64	15,878	6,404	16,076	6,468

¹ Including transient cases of Manila.² Data not available.³ Incomplete.TABLE 23.—*Showing the number of cases and deaths of diphtheria in Manila and in Provinces*

Year	Manila		Provinces ¹		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Average of 5 years, 1918-1922.....	(²)	15	(²)	329	(²)	344
1923.....	35	15	(²)	163	(²)	178
1924.....	61	25	162	94	223	119
1925.....	55	16	127	82	182	98
1926.....	124	25	150	95	274	120
1927.....	104	17	125	73	229	90
1928 ³	116	19	149	72	265	91

¹ Includes transient cases and deaths in Manila.² Data not available.³ Incomplete.TABLE 24.—*Showing the number of deaths from tuberculosis in Manila and in Provinces*

Year	Manila		Provinces ¹		Total	
	Respira- tory	Other organs	Respira- tory	Other organs	Respira- tory	Other organs
1921.....	1,371	134	23,347	1,984	24,718	2,118
1922.....	1,319	174	22,733	1,926	25,052	2,100
1923.....	1,473	197	25,191	1,796	26,664	1,993
1924.....	1,485	228	26,066	1,755	27,551	1,983
1925.....	1,530	135	25,273	2,126	26,803	2,261
1926.....	1,762	188	26,774	1,862	28,536	2,050
1927.....	1,664	186	26,415	1,833	28,075	2,019
1928 ²	1,575	162	22,690	1,423	24,265	1,585

¹ Includes transient deaths in Manila.² Incomplete.TABLE 25.—*Showing deaths from malaria*

Year	Manila	Prov- inces ¹	Total	Year	Manila	Prov- inces ¹	Total
1921.....	77	28,627	28,704	1925.....	59	24,267	24,326
1922.....	26	27,186	27,186	1926.....	51	24,317	24,368
1923.....	29	24,113	24,142	1927.....	27	19,493	19,520
1924.....	50	26,674	26,724	1928 ²	37	12,950	12,987

¹ Includes transient deaths in Manila.² Incomplete.

TABLE 26.—*Showing deaths from beriberi (infants and adults)*

Year	Manila	Prov- inces ¹	Total	Year	Manila	Prov- inces ¹	Total
1923.....	698	17, 417	18, 115	1926.....	526	16, 678	19, 204
1924.....	606	18, 331	18, 937	1927.....	288	16, 781	17, 069
1925.....	587	17, 944	18, 531	1928 ²	368	13, 534	13, 902

¹ Includes deaths of transients in Manila.² Incomplete.TABLE 27.—*Showing the number of cases of yaws treated in the Provinces*

Provinces	1923	1924	1925	1926	1927	1928
Abra.....						3
Agusan.....	551	857	913	1, 169	860	1, 331
Albay.....	3	1			16	27
Antique.....	28					3
Bataan.....	34	39	9	5	13	8
Batanes.....	337	790	303	295	231	46
Batangas.....	272	541	397	274	163	321
Bohol.....						3
Bukidnon.....						28
Bulacan.....	917	776	725	123	117	117
Cagayan.....		108	129	312	58	12
Camarines Norte.....						
Camarines Sur.....	1, 809				397	224
Capiz.....						
Catanduanes.....	77	1, 241	3, 634	5, 147	2, 575	708
Cavite.....		203	116			
Cebu.....	2			13	291	237
Cotabato.....		5, 834	3, 507	2, 194	912	1, 987
Davao.....	306		108	77	483	236
Ilocos Norte.....	298	1, 315	472	381	174	
Ilocos Sur.....	240	257	207	70	12	
Iloilo.....				115	44	27
Isabela.....						
Laguna.....	16				132	252
Lanao.....		17	11	3	112	136
La Union.....	7	6	4			2
Leyte.....		133	507	499	1, 091	441
Marinduque.....						
Masbate.....			18	370	410	129
Mindoro.....		11	3	3	6	
Misamis.....		33	27	363	95	39
Mountain Province.....	4	293			215	
Nueva Ecija.....		82	293	61	72	
Nueva Vizcaya.....			1			
Occidental Negros.....					160	150
Oriental Negros.....						
Palawan.....	1					
Pampanga.....			128	25	74	78
Pangasinan.....	423	1, 680	2, 055	1, 045	1, 051	665
Rizal.....	3, 532	411	204		40	90
Romblon.....			72	59	261	40
Samar.....		8	107	153	310	192
Sorsogon.....					25	55
Sulu.....	524	5, 489	2, 283	3, 583	2, 288	1, 818
Surigao.....	10	137	66	294	304	33
Tarlac.....	20	103	1, 070	258	307	181
Tayabas.....						8
Zambales.....	718	10		32	75	324
Zamboanga.....	30	506	34		59	
Total.....	10, 159	20, 881	17, 932	16, 923	13, 463	10, 029

NOTE.—1928 report is still incomplete

TABLE 28.—*Showing the names and bed capacities of hospitals under the Philippine health service*

Names of hospitals	At the beginning of 1928		At the end of 1928		Increase (+) or decrease (—)
	Number	Bed capacity	Number	Bed capacity	
Albay Provincial Hospital.....	1	40	1	42	2
Baguio Hospital.....	1	67	1	67	—
Batangas Provincial Hospital.....	—	—	1	30	30
Bayombong Hospital.....	1	20	1	20	—
Bontoc Hospital.....	1	25	1	35	10
Butuan Public Hospital.....	1	14	1	42	28
Cotabato Public Hospital.....	1	50	1	50	—
Cuyo Hospital.....	1	20	1	20	—
Dayao Public Hospital.....	1	58	1	60	2
Ilocos Sur Provincial Hospital.....	1	8	1	8	—
Kiangan Hospital.....	1	15	1	15	—
Laguna Provincial Hospital.....	1	35	1	35	—
Lanao Public Hospital.....	1	40	1	40	—
Lubuagan Hospital.....	1	10	1	10	—
Occ. Negros Provincial Hospital.....	1	35	1	35	—
Pangasinan Provincial Hospital.....	1	50	1	50	—
Puerto Princesa Hospital.....	1	16	1	16	—
Rizal Memorial Hospital.....	1	50	1	50	—
Sulu Public Hospital.....	1	40	1	40	—
Tarlac Provincial Hospital.....	1	30	1	30	—
Tayabas Provincial Hospital.....	1	50	1	60	10
Zamboanga General Hospital.....	1	80	1	80	—
Leyte Provincial Hospital.....	1	30	1	30	—
Misamis Provincial Hospital.....	1	21	1	25	4
Naga Provincial Hospital.....	1	22	1	22	—
San Pablo Hospital.....	—	—	1	15	15
Antipolo Emergency Hospital.....	1	6	1	6	—
Bukidnon Emergency Hospital.....	—	—	1	4	4
Cervantes Emergency Hospital.....	—	—	1	8	8
Dipolog Emergency Hospital.....	1	12	1	12	—
Ilocos Norte Emergency Hospital.....	1	6	1	12	6
Iloilo Emergency Hospital.....	1	24	1	24	—
Margosatubig Emergency Hospital.....	1	18	1	10	—8
Mati Emergency Hospital.....	1	6	1	6	—
Pampanga Emergency Hospital.....	1	12	1	12	—
San Lazaro Hospital.....	1	1,265	1	1,265	—
Culion Leper Colony Hospital.....	1	500	1	500	—
Total.....	33	2,675	37	2,786	111

TABLE 29.—*Showing summary of hospitals in operation under the Philippine health service*

Specification	At the beginning of 1928		At the end of 1928	
	Number	Bed capacity	Number	Bed capacity
General, insular.....	21	753	22	835
General, provincial.....	3	73	3	77
General, municipal.....	—	—	1	15
Emergency, provincial.....	7	84	9	94
Contagious, insular.....	1	1,265	1	1,265
Leprosaria ²	1	500	1	500
Total.....	33	2,675	37	2,786

¹ Including 500 beds for lepers.² Hospital of Culion Leper Colony.

TABLE 30.—*Showing the number and bed capacities of hospitals operated under Act 3114, as amended by Act 3168*

Specification	At the beginning of 1923		At the end of 1923	
	Num-ber	Bed ca-pacity	Num-ber	Bed ca-pacity
Completed and in operation.....	6	208	8	1 290
Completed, but not yet in operation.....	4	96	2	16
Total.....	10	304	10	306

¹ The bed capacity of Albay Provincial Hospital was increased from 40 to 42.

TABLE 31.—*Showing the number of lepers in the islands*

Provinces	Paroled lepers	Present-ing for treat-ment	Provinces	Paroled lepers	Present-ing for treat-ment
Abra.....	3	1	Masbate.....	1	1
Agusan.....	3	2	Mindoro.....	2	0
Albay.....	22	10	Misamis.....	8	2
Antique.....	6	5	Marinduque.....	1	1
Bataan.....	9	4	Mountain Province.....	1	0
Batanes.....	7	4	Nueva Ecija.....	28	6
Batangas.....	30	11	Occidental Negros.....	10	9
Bohol.....	34	9	Oriental Negros.....	6	4
Bulacan.....	62	13	Palawan.....	8	0
Cagayan.....	9	6	Pampanga.....	20	12
Camarines Norte.....	5	0	Pangasinan.....	15	6
Camarines Sur.....	35	11	Rizal.....	82	33
Capiz.....	22	7	Romblon.....	3	3
Cavite.....	32	7	Samar.....	6	0
Cebu.....	502	158	Sorsogon.....	6	5
Davao.....	3	1	Sulu.....	6	4
Ilocos Norte.....	7	4	Surigao.....	2	0
Ilocos Sur.....	41	8	Tarlac.....	16	4
Iloilo.....	72	21	Tayabas.....	13	8
Laguna.....	40	20	Zambales.....	15	6
Lanao.....	4	3	Zamboanga.....	6	0
La Union.....	12	4			
Leyte.....	14	4			
Manila.....	164	81	Total.....	1,394	498

Number of lepers under confinement at the end of 1928:

Culion.....	5,302
San Lazaro Hospital.....	381
Cebu leper detention camp.....	336
Other detention camps (data up to Nov. 30, 1928).....	140
Total.....	6,159

Number of negative lepers under observation on Dec. 1, 1928:

Culion.....	355
San Lazaro Hospital.....	18
Cebu leper detention camp.....	54
Total.....	427

Number of leper detention camps in operation.....	21
Number of detention camps constructed during 1928.....	3
Number of lepers in the Provinces on Nov. 30, 1928, awaiting transportation to Culion.....	131

San Lazaro Hospital:

Total number of lepers admitted during 1928—

San Lazaro cases.....	434
Temporarily admitted from Culion awaiting transportation to their home towns.....	290
Total.....	724

Number of lepers sent to Culion during 1928:	
Male	283
Female	122
Total	405
Number of negative lepers under observation on Dec. 31, 1928:	
Male	14
Female	4
Total	18
Number of lepers paroled during 1928:	
Male	30
Female	13
Total	43
Number of deaths (lepers) during 1928	
21	
Number of paroled lepers discharged during 1928:	
San Lazaro Hospital	17
Culion paroles	18
Total	35
Number of lepers in the hospital on Dec. 31, 1928:	
Male	244
Female	137
Total	381
Culion leper colony:	
Total number of lepers confined on Dec. 31, 1928	5,302
Negative lepers under observation	355
Total admissions (readmissions, 25)	784
Discharged	8
Paroled	313
Died	314
Nonleprous children transferred to the Public Welfare Commissioner ..	13
Nonleprous children transferred to their relatives	61
Nonleprous children remaining in Culion	70
Cebu leper detention camp:	
Total number of lepers confined on Dec. 31, 1928	336
Negative lepers under observation	54
Total admissions	222
Discharged (paroled)	31
Transferred to Culion	109

TABLE 32.—*Showing the number of insane*

INSULAR PSYCHOPATHIC HOSPITAL (OPENED DECEMBER 17, 1928)

Total number of insane at the beginning of 1928	0
Total number of insane admitted	377
By transfer from the San Lazaro Hospital:	
Male	200
Female	177
Total number of insane discharged, died, absconded	0
Total number of insane transferred	0
Total number of insane remaining at the end of 1928	377
Male	200
Female	177

SAN LAZARO HOSPITAL

Total number of insane at the beginning of 1928	603
Male	421
Female	182
Total number of insane admitted	511
Male	356
Female	155
Total number of insane discharged, died, absconded	440
Discharged:	
Male	236
Female	118
Died:	
Male	59
Female	25
Absconded:	
Male	1
Female	1
Total number of insane transferred	407
Male	214
Female	193
Total number of insane remaining at the end of 1928	267
Male	267
Female	0

BILIBID PRISON INSANE WARD

Total number of insane at the beginning of 1928	4
Male	4
Female	0
Total number of insane admitted	39
Male	36
Female	3
Total number of insane discharged	16
Cured:	
Male	16
Female	0
Total number of insane transferred	10
Male	7
Female	3
Total number of insane remaining at the end of 1928	17
Male	17
Female	0

CITY INSANE ASYLUM

Total number of insane at the beginning of 1928	177
Male	84
Female	93

Total number of insane admitted.....	243
Male	121
Female.....	122
Total number of insane discharged.....	191
Cured.....	154
Improved.....	18
Died	19
Total number of insane transferred and absconded.....	11
Total number of insane remaining at the end of 1928.....	218

TABLE 33.—Showing the number of hospitals, leprosaria, asylum, dispensaries, and laboratories

Year	Hospitals					Dispensaries	Laboratories
	Contagious	General	Leprosaria	Emergency	Asylum		
1926.....	2	23	3	6	-----	978	28
1927.....	1	24	3	7	-----	1,010	40
1928.....	1	26	3	9	1	1,043	40

¹ This figure was taken from the latest reports received.

TABLE 34.—Showing the amount of assorted vaccines and sera

Vaccine or sera	Unit	On hand Jan. 1, 1928	Received during 1928	Distributed during 1928	Balance Jan. 1, 1929
Antidiphtheric serum ¹	Tube.....	-----	1,413	1,267	146
Antitetanic serum.....	Unit.....	-----	4,770,000	4,770,000	-----
Antidysenteric serum.....	"Amp".....	165	6,950	7,111	4
Normal horse serum.....	do.....	-----	258	258	-----
Gonococcus vaccine.....	do.....	-----	241	241	-----
Dysenteric vaccine.....	Cubic centimeters.....	1,200	1,026,000	1,027,200	-----
Combined vaccine.....	do.....	-----	1,802,200	1,802,200	-----
Cholera vaccine.....	do.....	-----	718,000	718,000	-----
Typhoid vaccine.....	do.....	5,760	248,580	252,760	1,820
Fresh vaccine virus.....	Unit.....	42,200	2,100,000	2,039,300	102,900
Dried vaccine virus.....	do.....	55,000	1,250,000	1,285,300	19,700

¹ 5,000 units a tube.

TABLE 35.—Showing the summary of itemized appropriations and expenses—
for 1927–28

Specifications	1927	1928	Difference
Appropriations:			
Total for salaries and wages.....	P928,242.00	P952,026.00	P23,784.00
Total for miscellaneous expenses.....	1,788,570.00	1,882,800.00	94,230.00
Total for furniture and equipment.....	25,000.00	29,000.00	4,000.00
Total for special appropriations.....	861,600.00	866,600.00	5,000.00
Total.....	3,603,412.00	3,730,426.00	127,014.00
Expenses:			
Total for salaries and wages.....	871,031.48	917,330.11	46,298.63
Total for miscellaneous expenses.....	1,764,047.70	1,882,800.00	118,752.30
Total for furniture and equipment.....	24,835.79	29,000.00	4,164.21
Total for special appropriations.....	839,588.97	859,140.22	19,551.25
Total.....	3,499,503.94	3,688,270.33	188,766.39

TABLE 37.—*Showing the operation of the pension and retirement fund during 1928*

Total money of pension and retirement fund of the Philippine Health Service deposited in the Philippine National Bank as of Dec. 31, 1927	P84,597.00
Total money of pension and retirement fund of the Philippine Health Service deposited in the Philippine National Bank during 1928	22,125.85
Total cash of the pension and retirement fund of the Philippine Health Service deposited in the Philippine National Bank as of Dec. 31, 1928	106,722.85
Total deposits in the insular treasury	P73,353.29
Less liquid liabilities:	
Accounts payable	P1,780.54
Warrants payable	59,853.69
Undistributed collections	83.78
Total	61,718.01
Total cash of the pension and retirement fund of the Philippine Health Service deposited in the insular treasury as of Dec. 31, 1928	11,635.28
Total cash of the pension and retirement fund of the Philippine Health Service as of Dec. 31, 1928	118,358.13

DISPOSITIONS MADE OF THE FUND

Total surplus of the pension and retirement fund of the Philippine Health Service as of Dec. 31, 1927	94,097.32
Income from Jan. 1 to Dec. 31, 1928:	
Deductions from insular employees	P18,837.83
Deductions from provincial employees	39,276.28
Deductions from municipal employees	332.59
Deductions from pensions of retired employees, insular	1,718.57
Deductions from pensions of retired employees, provincial	733.22
Fines, forfeitures, etc., collected from insular employees	948.11
Fines, forfeitures, etc., collected from provincial employees	1,388.24
Interest earned on bank deposits	4,832.03
Total	68,066.87
Less expenses from Jan. 1 to Dec. 31, 1928:	
Payments made to retired employees	P40,594.52
Payments made to surviving families	3,211.54
Total	43,806.06
Total surplus of the pension and retirement fund of the Philippine Health Service from Jan. 1 to Dec. 31, 1928	24,260.81
Total surplus of the pension and retirement fund of the Philippine Health Service as of Dec. 31, 1928	118,358.13

BUREAU OF QUARANTINE SERVICE STATISTICAL TABLES

TABLE 1.—*Number of vessels inspected and fumigated, and number of persons inspected during 1920, 1922, 1924, 1926, 1927, and 1928*

	1920	1922	1924	1926	1927	1928
Vessels inspected	781	775	841	854	902	1,270
Vessels fumigated	176	181	150	224	298	488
Persons inspected	135,250	129,043	115,332	133,969	143,862	182,280

TABLE 2.—*Number of bills of health issued to vessels bound for the United States and foreign ports*

Ports	1920	1924	1926	1927	1928
Manila	999	996	981	1,036	1,089
Cebu	105	238	287	256	289
Iloilo	127	190	187	213	209
Zamboanga	27	136	116	94	107
Jolo	55	46	57	48	63
Davao	(1)	(1)	55	74	82
Legaspi	(1)	(1)	18	13	24
Cavite	30	37	11	6	4
Olongapo	3	4	1	6	0

¹Ports not open.

TABLE 3.—*Financial statement*

Item	1924	1925	1926	1927	1928
Debits:					
Appropriation.....	P153, 429. 00	P152, 944. 00	P187, 014. 00	P165, 244. 00	P165, 244. 00
Allotment by emergency board.....	2, 187. 52	2, 333. 42	-----	-----	-----
Total available during the year..	155, 616. 52	155, 277. 42	187, 014. 00	165, 244. 00	165, 244. 00
Credits:					
Expended during the year.....	139, 744. 53	135, 026. 70	164, 977. 39	129, 623. 72	131, 870. 25
Balance fixed assets allotment carried forward.....	1, 192. 60	451. 83	3, 757. 35	-----	-----
Reverted to the Treasury unexpended.....	14, 679. 39	19, 798. 89	18, 279. 26	35, 620. 27	33, 373. 75
Total.....	155, 616. 52	155, 277. 42	187, 014. 00	165, 244. 00	165, 244. 00
Collections for the year which were deposited in the Treasury.....	1, 498. 87	4, 497. 40	4, 767. 30	2, 362. 04	2, 456. 56

ANNUAL REPORT OF THE SECRETARY OF FINANCE

MARCH 14, 1929.

SIR: I have the honor to submit the following annual report of the department of finance, corresponding to the year ending December 31, 1929.

The year just ended has been a normal and fairly prosperous one. The economic and business conditions in the country were sound, except that the destructive typhoon which swept various parts of the country toward the end of the year caused enormous damages to crops and property. The effects of this typhoon in the business will no doubt be felt during this and also in the future years with regard to coconut and hemp products. Furthermore, the continued agitation in the United States against the free entry of some of the principal export products of the islands has caused an enormous anxiety as regards the business and economic progress of the country. It is feared that should the agitation persist, the success of the policy promoting the economic development of these islands greatly and consistently emphasized by all the administrations since the inception of the American régime can hardly be expected.

In general, the production of the country during the year under review has been fairly satisfactory, in spite of adverse weather conditions suffered by some crops. But, due to the low prices prevailing, the value of the total productions has decreased as compared with that of last year.

Rice production was one-half of 1 per cent less on account of the unfavorable weather condition at the beginning of planting and due to lower prices of this commodity the total value of production decreased from ₱200,970,720 in 1927 to ₱183,262,670 in 1928; tobacco production declined by 8 per cent and the price per quintal has gone down from ₱12 to ₱9.30, so that the value of production was very much lower than that of the previous year; and corn recorded a decrease of 13 per cent in production and the slump in its prices reduced the total value of production from ₱34,697,410 in 1927 to ₱26,047,100 in 1928. On the other hand, the production of sugar increased 5 per cent and lower prices did not prevent its value to increase 1 per cent or from ₱113,591,090 in 1927 to ₱114,136,710 in 1928; the increase in the production of coconut was followed by the increase in value by 4 per cent; and abaca yielded 2,826,340 piculs during the year as compared with 2,731,630 piculs in 1927, but the value was brought down from ₱59,240,800 in 1927 to ₱54,362,440 in 1928, due also to the decrease in prices.

The total foreign trade of the Philippine Islands for the year 1928 reached the exceptionally high figure of ₱579,422,888 as against ₱542,851,113 in 1927, or an increase of ₱36,571,775. The year under review nearly equaled the unprecedented trade activity of the banner year of 1920 when the total trade was ₱601,124,276. The imports for the year amounted to ₱269,313,796 as compared with ₱231,702,943 in 1927, showing a notable increase of ₱37,610,853, while the exports totaled ₱310,109,092 as against ₱311,148,170, or a diminution of a little over ₱1,000,000. The balance of trade was, however, in favor of the islands.

As usual, the largest portion of our trade was with the United States, about 69 per cent thereof having been with that country, followed by Japan, 6.87 per cent; Great Britain, 4.68 per cent; and China 3.47 per cent.

The leading nations participating in carrying the foreign trade of the Philippine Islands maintained their respective positions which they have been holding for the past few years. As it is always expected, the American vessels retained the leadership, having carried merchandise for the islands to the value of ₱263,513,136 as against ₱267,912,253 in 1927, or a decrease of ₱4,399,117. Vessels registered under the British flag again came next to the American ships, and the former displayed unusual activity by carrying merchandise from a value of ₱167,475,647 in 1927 to ₱186,279,790 during the year under review. The Japanese vessels occupied the third place, but like the American ships a decrease was registered for they carried ₱40,249,821 only in 1928 as against

₱45,106,818 in the previous year. The ships under the German flag kept the fourth place and continued their advancing strides to regain their position before the World War by registering another considerable increase by jumping from ₱23,319,726 in 1927 to ₱28,713,314 in 1928. But worthy of note was the part played by the Norwegian vessels. They made the most spectacular leap by coming out from an obscure position to the fifth place in 1928 to displace the Dutch vessels, they having carried to their credit ₱13,949,417 as against ₱1,311,468 in the preceding year.

Vessels of Holland, Philippines, Spain, and Denmark showed increases in 1928, the value of merchandise transported by these vessels being ₱13,600,855, ₱3,579,946, ₱3,242,269, and ₱2,148,923, respectively. The Swedish vessels recorded slight decrease, having carried articles to the value of ₱4,175,358 during the year, while the French and Chinese ships have been relegated to negligible factors in the foreign commerce of this country.

The United States proved again to be the best customer of Philippine products having purchased about 75 per cent of the total exports and was followed by Great Britain, Japan, and Spain. In the order of their importance as to value, the principal local products exported during 1928, were sugar, hemp, coconut oil, copra, tobacco products, embroideries, desiccated coconut, hats, lumber, and copra meal.

The value of sugar exported during the year reached ₱95,085,879 as compared with ₱100,591,919 in 1927 or a decrease of 5 per cent. This represented 31 per cent of the islands total exports. In quantity the exportations of sugar for 1928 exceeded that for 1927, but due to lower prices of this commodity throughout the year under consideration, the value had shown a decrease. Almost all of the centrifugal and refined sugar went to the United States, while the largest portions of the muscovado were distributed among China, Hong Kong, and Japan.

Hemp, the second largest item of exports, constituted 11 per cent of the total exports of the country. The value of the shipment abroad during the year was ₱53,187,212 as compared with ₱59,374,258 in 1927 or a decrease of 10 per cent. The cause of this decrease, as in sugar, was attributed to low prices. The greatest markets for this product were the United States which absorbed 35 per cent of our abaca exports; United Kingdom, 23 per cent; and Japan, 20 per cent.

The value of coconut oil exported during the year reached ₱46,978,345, as against ₱49,681,356 in 1927, or a decrease of 5 per cent. Almost all of our coconut-oil exports, 98 per cent, went to the United States.

Copra exports during the year registered an increase of 18 per cent, from ₱38,311,481 in 1927 to ₱45,084,682 in 1928. About 80 per cent of these products was exported to the United States.

A decrease of 4 per cent has been registered in the exportations of tobacco products. The value exported during the year was ₱17,142,873, whereas during the preceding year it amounted to ₱17,817,331. More than one-half of the exportations of our tobacco products in 1928 went to the United States markets.

Exports of embroideries during the year have shown an increase, from ₱8,006,952 in 1927 to ₱9,047,936 in 1928, the increase being 13 per cent. Almost all of the locally manufactured embroideries were exported to the United States, the portion sent to other countries being negligible.

The value of the exportations of desiccated coconut increased from ₱5,700,120 in 1927 to ₱7,447,171 in 1928, or 31 per cent; and more than 99 per cent of these went to the United States.

The demand for Philippine hats in 1928 was very encouraging. The value of the shipment to foreign markets was ₱6,717,925, as compared with ₱3,135,772 in 1927, or an increase of 114 per cent.

The value of lumber, including logs, exported during the year was ₱6,253,001, an increase of 12 per cent over that exported in 1927, which amounted to ₱5,587,614. Fifty-two per cent of our lumber sent abroad went to the United States.

Copra meal to the value of ₱5,772,274 was exported to foreign markets in 1928. As compared with the preceding year, when the exportations of this product were ₱4,969,078, there was an increase of 16 per cent. It is interesting to note that 75 per cent of this product went to Germany.

In general it may be stated therefore that the decline in the exports of this country during 1928 could be attributed mainly to the slump in prices of sugar and abaca, the two most important export products of these islands.

One very satisfactory feature in the islands' foreign trade in 1928 was the substantial increase in the importation of machinery, machines, and agricultural implements from ₱11,000,000 to ₱17,000,000 in round figures.

A discordant note, however, in our foreign trade was the increase in rice importation, although such a condition swelled the government revenue. The increase was due to unfavorable climatic conditions in the rice-producing regions.

Of the articles imported by the islands, 62 per cent, or ₱167,716,135, originated from the United States. This amount was ₱24,759,541 more than that recorded for 1927. From Japan, Great Britain, China, Germany, and French East Indies substantial increases in our importations were also registered. In the order of their importance as to value, the principal imports of the year were cotton and its manufactures, iron and steel and their manufactures, mineral oils, meat and dairy products, automobiles and accessories, wheat flour, silk and its manufactures, paper and its manufactures, tobacco products, and coal. The respective values of these articles as imported in 1928 were more than those of the previous year.

The currency circulation of the islands on December 31, 1928, was ₱129,620,557.545 or an increase of ₱2,174,468.42 as compared with that of the same date of the preceding year when the circulation was ₱127,446,089.125.

The same banks and trust companies as reported on December 31, 1927, were operating on December 31, 1928, which were as follows: Domestic—Philippine National Bank, Bank of the Philippine Islands, China Banking Corporation, Mercantile Bank of China, Monte de Piedad and Savings Bank, the Philippine Trust Co., Postal Savings Bank, and the Peoples Bank & Trust Co. Foreign—International Banking Corporation, Hongkong & Shanghai Banking Corporation, Chartered Bank of India, Australia & China, and the Yokohama Specie Bank (Ltd.). Their favorable financial condition was shown in the following increases: More than ₱15,999,000.00 in total resources; ₱29,990,837.86 in loans and discounts, including overdrafts; ₱6,394,654.17 in undivided profits; and ₱18,118,349.85 in deposit liabilities, including cashier's and certified checks and the amount due to local banks.

There was a decrease in cash in vaults amounting to ₱12,774,453.57. The paid-in capital stock showed an apparent decrease of ₱321,750, which is accounted for by the elimination from the capital stock account of the sum of ₱1,000,000, representing the working capital assigned to the local branch of one of the foreign banks, and by the increase of ₱678,250 of the paid-in capital stock of a local bank.

Three new insurance companies entered the field of this business in the Philippines during the year 1928, and of the 74 companies doing business at the beginning of the same year none has withdrawn from the field. The total number of insurance companies doing business on December 31, 1928, has therefore increased to 77. Of these, 6 were domestic, 23 American, and 48 foreign. The volume of business transacted during the year 1928 by insurance companies, except life, amounted, in round figures to ₱843,862,000 with a net premium income of ₱6,685,000.

The gold standard fund which according to Act No. 3058 shall be maintained in a sum not less than 15 per cent of the money of the government of the Philippine Islands in circulation and available therefor was maintained throughout the year over the minimum limit. The cash balance of the gold standard fund amounted on December 31, 1928, to ₱27,460,300.85 which represented about 24.1 per cent of the money of the Philippine Islands in circulation and available for circulation.

The amount of the treasury certificate fund which takes care of the redemption at par of the treasury certificates issued was ₱91,975,007 on December 31, 1928. This amount represented the 100 per cent of all treasury certificates in circulation and available for circulation. It consisted of silver coins to the amount of ₱14,149,900 and United States gold coins in the sum of ₱3,700,000 and of gold deposits in member banks of the Federal reserve system in the United States to the amount of ₱74,125,107.

The following tables show the income, expenditures, and current surplus of the insular government for 1928 as compared with 1927, segregated by fund, viz.: General fund, special fund, and bond fund.

General fund—Comparative budget statement

Items	Fiscal year 1928	Fiscal year 1927
Income:		
Revenue from taxation—		
Import duties.....	P19,177,375.81	P15,952,850.25
Excise tax.....	16,587,928.93	15,770,458.12
License and business tax.....	21,107,933.62	21,240,112.62
Wharfage tax.....	2,578,361.31	2,474,959.59
Franchise tax.....	169,044.67	157,521.55
Documentary stamp tax (internal revenue).....	804,384.43	745,889.30
Documentary stamp tax (customs revenue).....	659,066.22	633,837.83
Income tax.....	4,227,270.90	3,332,197.72
Immigration tax.....	296,496.00	355,024.00
Tonnage dues.....	395,031.62	384,006.38
Inheritance tax.....	270,359.86	538,775.60
Other.....	16,966.52	13,855.30
Apportionment of internal revenue to local government.....	3,164,083.55	3,164,083.55
	63,126,136.34	58,435,404.71
Incidental revenue—		
Revenue from public forests.....	1,668,652.68	1,387,824.69
United States internal revenue.....	794,626.02	736,908.62
Fines and forfeitures.....	680,100.94	698,464.77
Sales of public domain.....	72,053.15	31,431.86
Other.....	53,843.00	54,466.95
	3,269,275.79	2,909,096.89
Earnings and other credits—		
Operating income of commercial and industrial units.....	8,576,160.34	8,165,225.25
Other income of operating units.....	114,462.07	124,183.07
Income incidental to functional activities.....	3,681,232.11	3,791,536.04
Interest on bank deposits.....	1,624,083.32	1,460,990.83
Sales of fixed property.....	38,489.64	35,062.48
Surplus transferred from friar lands estate.....	607,719.99	708,939.85
Sales of mortgaged property and collection of agricultural bank loans.....	5,004.05	11,115.38
Interest repayments, railway companies.....	70,802.30	647,292.39
Collection of loans to local governments.....	480,996.67	497,831.67
Surplus transferred from San Lazaro estate.....	178,384.89	125,510.35
Repayment of loans from currency reserve.....	6,000.00	8,400.00
Repayment of Philippine National Bank losses.....	2,853,484.68	
Repayment of Manila Hotel Co. bonds.....	50,000.00	150,000.00
	18,286,820.06	15,726,087.31
Credit adjustments, prior year—		
Repayments to prior year's expense.....	420,035.95	275,338.87
Inventory adjustments (sales stock and supplies and materials).....	88,937.17	369,393.87
Expired money orders (sec. 1973, administrative code).....	23,302.72	12,792.68
	532,275.84	657,525.42
Total income.....	85,214,508.03	77,728,114.33
Expenditure:		
Revenue service—		
Expense of revenue collections.....	1,829,673.82	1,768,703.59
Operating expense of commercial and industrial units.....	7,331,968.73	6,822,059.43
	9,161,642.55	8,590,763.02
Debt service—		
Interest and exchange on public debt.....	6,129,516.65	6,710,099.91
Payment to sinking funds.....	3,805,053.16	3,125,971.79
	9,934,569.81	9,836,071.70
General welfare service—		
Legislation.....	1,923,789.31	1,834,036.44
Executive direction and control.....	1,770,462.66	1,630,542.66
Adjudication.....	2,708,936.47	2,598,889.19
Law and order.....	5,477,687.78	5,271,391.33
Public health.....	4,526,144.89	4,379,394.39
Protection against force majeure.....	228,444.92	223,532.71
Regulation of public utilities.....	121,776.20	113,252.26
Other protective service.....	91,938.39	83,245.41
Public education.....	6,907,828.99	6,816,804.15
Public correction.....	880,435.75	955,753.47
Public charities.....	712,522.84	686,550.43
Conservation of natural resources.....	700,681.49	663,567.64
Development of commerce.....	3,053,971.31	2,846,074.72

General fund—Comparative budget statement—Continued

Items	Fiscal year 1928	Fiscal year 1927
Expenditures—Continued.		
General welfare service—Continued.		
Development of agriculture.....	P3, 048, 464. 87	P3, 096, 867. 64
Philippine publicity.....	30, 000. 00	129, 396. 99
Development of industrial arts and sciences.....	554, 251. 23	551, 479. 22
Other economic development.....	241, 798. 63	202, 728. 58
Aid to local governments.....	17, 045, 147. 45	16, 653, 457. 31
	50, 024, 263. 18	48, 736, 964. 54
Outlays and investments—		
Purchase and construction of public works.....	5, 018, 234. 71	2, 282, 102. 16
Purchase and construction of equipment.....	764, 266. 46	666, 119. 67
Purchase of National Development Co. stock.....		200, 000. 00
Advances to railway companies under guaranty contract.....	692, 795. 30	687, 239. 40
Purchase of private shares of Philippine National Bank stock.....	3, 125. 00	16, 150. 00
Purchase of Manila Railroad Co. stock.....	1, 000, 000. 00	
	7, 478, 421. 47	3, 851, 611. 23
Extraordinary charges—		
Retirement gratuities, Act 3589.....	191, 546. 08	193, 031. 86
Pension, Act 2622.....	12, 000. 00	12, 000. 00
Expenses of issue and sales of bonds.....	446. 70	
Contingent losses for the rehabilitation of the Philippine National Bank.....		59, 980. 00
Reimbursement of expenditures for legislative building, Act 3112.....	440, 800. 00	440, 800. 00
	644, 792. 78	705, 811. 86
Debit adjustments, prior year—		
Accounts receivable written off.....	1, 027. 51	47, 671. 38
Losses from revaluation of stock inventory.....	129. 90	3, 855. 76
	1, 157. 41	51, 527. 14
Transfer of funds—		
University of the Philippines.....	1, 820, 000. 00	1, 820, 000. 00
Tobacco inspection fund.....		300, 000. 00
Cadastral survey fund (restoration of reverted income).....	135, 559. 76	195, 784. 93
Benguet auto line.....		123, 148. 74
Baguio dwellings and equipment.....		40, 984. 17
Cadastral survey loan fund.....	416, 400. 00	83, 600. 00
Bohol Filipino colony.....		5, 000. 00
Cagayan Filipino colony.....		5, 000. 00
William Atkinson Jones mausoleum.....	10, 000. 00	
	2, 381, 959. 76	2, 573, 517. 84
Total expenditures.....	79, 626, 806. 96	74, 346, 267. 33
Increase in surplus during the year:		
Surplus from current year's revenue.....	9, 363, 078. 44	5, 820, 549. 44
Surplus from previous year's revenue.....	3, 775, 377. 37	2, 438, 702. 44
	5, 587, 701. 07	3, 381, 847. 00
Add surplus Jan. 1.....	35, 591, 566. 39	32, 209, 719. 39
Surplus Dec. 31:		
Appropriated.....	3, 561, 795. 79	4, 881, 724. 72
Unappropriated.....	37, 617, 471. 67	30, 709, 841. 67
	41, 179, 267. 46	35, 591, 566. 39

Special fund—Comparative statement of receipts and expenditures

Items	Fiscal year 1928	Fiscal year 1927
Income:		
Revenue from taxation—		
Excise tax.....	P3, 630, 533. 48	P2, 926, 098. 38
Apportionment of highways special fund.....	3, 439, 173. 84	2, 926, 098. 38
License and business tax.....	1, 233, 590. 97	1, 131, 043. 81
Apportionment of motor vehicle fund, Act 3045.....	1, 000, 000. 00	1, 000, 000. 00
	424, 950. 61	131, 043. 81

Special fund—Comparative statement of receipts and expenditures—Continued

Items	Fiscal year 1928	Fiscal year 1927
Income—Continued.		
Earnings and other credits—		
Fines and forfeitures.....	P39,639.29	P28,623.77
Sales of supplies and materials.....	11,795.14	11,901.61
Income from rentals.....	51,006.29	36,481.27
Interest on deferred payments and on investments and securities.....	247,743.12	269,013.23
Service income.....	617,575.35	665,136.50
Sales of fixed property.....	25,003.55	21,759.45
Sales of San Lazaro real estate.....	55,785.72	68,243.89
Prior year adjustments.....	49,388.77	9,217.03
Sales of friar lands real estates.....	22,986.94	24,282.95
Inspection of tobacco.....	166,445.59	153,215.54
Land title fees.....	32,052.73	16,056.52
Premium on property insurance.....	108,610.53	108,065.55
Premium on surety bonds.....	83,585.98	100,628.12
Voluntary contribution from the public.....	79,457.15	30,015.00
Inventory adjustments.....	76.83	6,736.00
Incidental receipts.....	33,708.96	27,886.74
Repayment of real-estate mortgage loans.....	504,248.91	-----
Repayment of cadastral survey loans.....	49,590.54	-----
Repayment of loans to Provinces and municipalities.....	54,419.33	-----
	<u>2,234,020.72</u>	<u>1,577,263.17</u>
Total income.....	<u>2,658,971.33</u>	<u>1,708,306.98</u>
Appropriation from the general fund—		
University of the Philippines.....	1,820,000.00	1,820,000.00
Cadastral survey fund (restoration of reverted income).....	135,559.76	195,784.93
Bohol agricultural colony.....	-----	5,000.00
Cagayan Filipino colony.....	-----	5,000.00
Tobacco inspection fund.....	-----	300,000.00
Benguet auto line.....	-----	123,148.74
Baguio dwellings and equipment.....	-----	40,984.17
Loans to corporations of private surveyors.....	416,400.00	83,600.00
William Atkinson Jones Mausoleum.....	10,000.00	-----
Total appropriations.....	<u>2,381,959.76</u>	<u>2,573,517.84</u>
Total receipts.....	<u>5,040,931.09</u>	<u>4,281,824.82</u>
Expenditures:		
Salaries.....	1,528,206.22	1,548,667.17
Wages.....	495,752.96	484,205.91
Travel expenses of personnel.....	123,461.09	84,626.25
Freight, express, and delivery service.....	47,549.92	57,584.02
Postal, telegraph, telephone, radio, and cable service.....	23,932.14	24,231.20
Illumination and power service.....	21,890.43	23,871.55
Miscellaneous service.....	112,309.27	98,066.11
Rental of buildings and grounds.....	20,494.52	22,231.96
Consumption of supplies and materials.....	390,244.66	412,770.22
Printing and binding reports, documents, and publications.....	16,914.65	19,917.73
Cash contributions and gratuities (other than to local governments).....	87,545.30	75,667.12
Discretionary expenditures.....	1,188.11	867.57
Travel expenses of persons not government employees.....	229.96	1,000.07
Maintenance and repair of plant and equipment.....	49,741.47	54,068.88
Purchase of equipment.....	183,792.07	181,984.18
Purchase and construction of public works.....	179,091.72	275,563.21
Real-estate mortgage loans—San Lazaro estate.....	486,513.70	1,763,777.19
Real-estate mortgage loans—friar lands estates.....	74,290.00	304,159.20
Loans to Provinces and municipalities.....	2,591,300.00	778,000.00
Extraordinary losses.....	4,145.38	1,456.04
Property insurance losses.....	22,913.49	29,312.15
Shortages and losses paid.....	31,273.56	97,419.83
Deterioration of supplies and sales stock.....	32.83	98.77
Engineering construction (contract payments only).....	5,998.45	-----
Losses—uncollectible debts.....	1,011.10	187.48
Loans to corporation of private surveyors.....	50,649.57	83,600.00
Total expenditures.....	<u>6,550,472.57</u>	<u>6,423,333.81</u>
Increase in surplus during the year.....	<u>1,509,541.48</u>	<u>2,141,508.99</u>
Add surplus Jan. 1.....	<u>7,640,149.48</u>	<u>9,781,658.47</u>
Surplus, Dec. 31.....	<u>6,130,608.00</u>	<u>7,640,149.48</u>

Bond fund—comparative statement of income and expenditures

Items	Fiscal year 1928	Fiscal year 1927
Balance January 1:		
Financial interests protection, Act 2999—		
National bank circulation reserve, Act 3174.....	P400, 585. 34	P4, 754, 202. 88
Balance (unassigned).....	9, 755, 414. 66	5, 401, 797. 12
Manila port works, Act 2908—		
Unreleased appropriation.....	1, 023, 772. 16	1, 823, 772. 16
Released appropriation.....	650, 945. 33	723, 793. 60
Irrigation systems, Act 2940—		
Unreleased appropriation.....	7, 011, 038. 96	8, 295, 007. 95
Released appropriation.....	1, 734, 808. 96	1, 505, 439. 41
	20, 576, 565. 41	22, 504, 013. 12
Income:		
Proceeds of bonds, Act 3204.....		3, 612, 696. 50
Proceeds of bonds, Act 3413.....	1, 596, 000. 00	
Proceeds of bonds, Act 3417.....	1, 592, 385. 00	
Proceeds of collateral bonds.....	4, 548, 942. 18	204, 526. 00
Repayment of advances, Act 3112 (Act 2940).....	440, 800. 00	440, 800. 00
Transfers—		
Financial interests protection, Act 2909—		
National bank circulation reserve, Act 3174.....	400, 585. 34	4, 553, 617. 54
Balance (unassigned).....	400, 585. 34	4, 353, 617. 54
Manila port works, Act 2908—		
Released appropriation.....		800, 000. 00
Unreleased appropriation.....		800, 000. 00
Irrigation system, Act 2940—		
Released appropriation.....	1, 020, 000. 00	1, 724, 768. 99
Unreleased appropriation.....	1, 020, 000. 00	1, 724, 768. 99
	8, 178, 127. 18	4, 258, 022. 50
Total opening balance and income.....	28, 754, 692. 59	26, 762, 035. 62
Expenditures:		
Construction and equipment of piers, and other port works, Act 2908.....	308, 559. 64	872, 848. 27
Construction of irrigation system, Act 2940.....	1, 843, 310. 90	1, 514, 273. 38
Advances for completion of Legislative Building, Act 2940.....	16, 243. 33	18, 873. 94
Purchase of metropolitan water district bonds, Act 3204.....		3, 612, 696. 50
Purchase of provincial and municipal bonds.....	4, 548, 942. 18	204, 526. 00
	6, 717, 056. 05	6, 185, 470. 21
Balance December 31:		
Financial interests protection, Act 2999—		
National bank circulation reserve, Act 3174.....		400, 585. 34
Balance (unassigned).....	10, 156, 000. 00	9, 755, 414. 66
Manila port works, Act 2908—		
Unreleased appropriation.....	1, 023, 772. 16	1, 023, 772. 16
Released appropriation.....	342, 385. 69	650, 945. 33
Irrigation systems, Act 2940—		
Unreleased appropriation.....	6, 431, 838. 96	7, 011, 038. 96
Released appropriation.....	895, 254. 73	1, 734, 808. 96
Cebu port works, Act 3413.....	1, 596, 000. 00	
Iloilo port works, Act 3417.....	1, 592, 385. 00	
	22, 037, 636. 54	20, 576, 565. 41

The general fund table shows a total income of ₱85,214,508.03 during 1928 and ₱77,728,114.33 during 1927. Deducting from the former sum the special item of "repayment of Philippine National Bank losses," amounting to ₱2,853,484.68, the regular income for 1928 will be ₱82,361,023.35. This is ₱4,632,909.02 larger than the income of the previous year. The increase is mainly attributed to the greater collection in import duties due to the heavier importations of rice and textiles and in excise tax, where kerosene, distilled spirit, and other items figured prominently, and in income tax.

Deducting from the expenditures the extraordinary items consisting of "purchases of private shares of Philippine National Bank stock," "purchase of Manila Railroad Co. stocks," "expenses of issue and sales of bonds," and "contingent losses for the rehabilitation of the Philippine National Bank," totaling ₱1,003,571.70 for 1928 and ₱76,130 for 1927, the regular government expenditures during 1928 will be ₱78,623,235.26 and during 1927, ₱74,270,137.33. The increase of ₱4,353,097.93 is chiefly due to larger amounts expended for public works, postal service, and aid to local governments.

It will be noted from the table that the general-fund surplus on December 31, 1928 was ₱41,179,267.46, as compared with ₱35,591,566.39 at the end of 1927. By deducting from 1928 surplus the items consisting of "estimated yearly outstanding appropriations," ₱3,500,000; "estimated yearly continuing assets, net," ₱16,000,000; "estimated yearly advances to money-order fund," ₱6,500,000; and "balance of commitment for the purchase of shares of stock of the Manila Railroad Co. for the extension of its lines to the Bicol regions, authorized under Act 3116," ₱2,000,000; which all together amount to ₱28,000,000, a net unappropriated cash surplus of ₱13,179,267.46 is obtained.

The special-fund table consists of continuing appropriations or funds whose unexpended balances do not revert to the general fund at the end of the year, but remain available until exhausted. Compared with the preceding year, when the surplus of the special fund was ₱9,781,658.47, there was a decrease of ₱2,141,508.99, for this fund had only a surplus of ₱7,640,149.48 on December 31, 1928.

The bonds issued by the Philippine government up to December 31, 1928, amounted to ₱189,454,000. Deducting from this sum the collateral bonds issued against provincial and municipal bonds of ₱14,217,000, which are secured by bonds in the same amount issued by provincial and municipal governments and held by the insular government, the net bonded indebtedness of the Philippine government on December 31, 1928, would be ₱175,237,000. Of this amount, ₱152,600,000 were obligations of the insular government, and the balance of ₱22,637,000 were obligations of the provincial and municipal governments.

Under the Jones Act the debt limit of the insular government is an amount equal to 10 per cent of the assessed value of the taxable property of the country, excluding the bonds issued for the purchase of the friar land estates, amounting to ₱14,000,000. The last assessed valuation of the taxable property of the islands is ₱1,721,029,057. Basing from this, the debt limit of the insular government is therefore ₱172,102,905. In addition to this, the insular government is also authorized to issue collateral bonds not exceeding ₱20,000,000, secured by bonds in the same amount issued by provincial and municipal governments.

The bonded indebtedness has increased by ₱7,252,000 during the year 1928. This increase was caused by the sale of ₱1,500,000 Cebu port works and improvement bonds, Act No. 3413, ₱1,500,000 Iloilo port works and improvement bonds, Act No. 3417, and ₱4,252,000 collateral bonds issued under Acts Nos. 3278, 3279, 3280, 3281, 3282, 3329, 3331, and 3352.

In spite of the additional sale of bonds under Acts Nos. 3413 and 3417, the interest together with exchange premium at the rate of $\frac{7}{8}$ of 1 per cent paid by the government on account of the insular bonded indebtedness during the year 1928 was ₱6,369,261.06 only as compared with ₱6,959,644.26 paid in 1927, or a decrease of ₱590,383.20. This decrease was due to the cancellation of insular bonds in the amount of ₱15,720,000 under Act No. 3014, held by the sinking funds.

The bond fund statement above shows a balance of ₱22,037,636.54 on December 31, 1928. This is ₱1,461,071.13 larger than the balance of the preceding year.

To redeem the bonds issued, sinking funds are set aside according to law. On December 31, 1928, the total amount of sinking funds thus set aside for insular bonds was ₱37,145,806.89 and that for the provincial and municipal bonds was ₱6,372,404.54.

A review of the finances of the government would not be complete without considering its activities in business enterprises in view of the vast amount invested in the same.

The Sabani estate owned by the National Development Co. being still under lease of private persons, the activities of said company during the year 1928 were limited as in the preceding year to the supervision of its investments in the National Coal Co. and the Cebu Portland Cement Co. The total paid-up capital of the National Development Co. as of December 31, 1928, amounted to ₱5,935,800, the same as on December 31, 1927. The total of its investments is ₱5,650,549.66 and is distributed as follows: Cebu Portland Cement Co., ₱2,750,000; loan to National Coal Co., ₱2,380,527.25; National Coal Co. liquidation account, ₱130,006.93; and Sabani estate (net cost), ₱390,015.48.

The assets and liabilities of the National Coal Co. have been turned over to the National Development Co., and so the affairs of the coal company are therefore administered at present by the National Development Co.

The Cebu Portland Cement Co. is now a profitable going concern. According to the report of the president of this company, the profits for the year 1928

amounted to ₱430,129.93 which were ₱50,800.06 more than those of 1927, and these profits represented 15 per cent on the paid-up capital.

The auditor of the Philippine National Bank has reported that the net profit obtained by the bank during the year under review was ₱2,884,882.85, as against ₱4,037,745.55 for 1927.

The Manila Railroad Co. was more prosperous last year than in the preceding one. From its net income of ₱3,041,011.50, the company was able to pay the government the sum of ₱250,000 as partial refund of the funds advanced to pay the interests of the bonds of the company guaranteed by the government.

More detailed information is furnished below of the activities of the four bureaus under the jurisdiction of this department.

BUREAU OF THE TREASURY

Statement showing distribution of cash balances

Names of funds	Cash in treasury vaults		Cash in banks		Total expressed in Philippine currency
	United States currency	Philippine currency	United States currency	Philippine currency	
General fund.					
Gold standard fund					P33,856,166.175
Treasury certificate fund	\$1,803,835.85	4,141,339.45	\$12,354,702.965	P3,931,259.68	27,460,300.85
Depository funds:	1,850,000.00	14,149,900.00	87,062,553.50		91,975,007.00
Austin memorial fund.		24.58			24.58
Bank of the Philippine Islands circulating notes redemption fund, Act No. 3330			1,125,000.00		2,250,000.00
Coast and Geodetic Survey disbursing officers' account.		2,344.05			2,344.05
Fourth of July celebration fund.		824.94		5,475.38	6,300.32
Insular disbursing officers' account.		454,560.87			454,560.87
Money-order fund.		(8,462,565.40)			(8,462,565.40)
Manila Railroad Co., Acts Nos. 1510 and 1592				61,276.93	61,276.93
Philippine National Bank emergency fund.		55,478.67			55,478.67
Treasurer of the United States and United States disbursing officers' account.		1,164,247.56			1,164,247.56
Treasury overage account.		138.67			138.67
National Development Co.		70,003.10			70,003.10
United States internal revenue documentary stamp.		7,143.50			7,143.50
United States military reservation at Batuan.		44,611.14			44,611.14
Sinking funds:					
Insular—					
Currency bonds, Act No. 3058		163,559.64	80,651.06		324,861.76
Financial interest protection bonds, Act No. 2999		98,980.81	34,013.50		167,007.81
Irrigation and permanent public works bonds (sundry), Act No. 3013		47,820.76	54,536.27		156,893.30
Land purchase bonds, Act No. 1749		164,527.59	50,709.05		265,945.69
Manila port works and improvement bonds, Act No. 2908		132,714.25	32,910.95		292,900.75
Manila Railroad Co. purchase bonds, Act No. 2625		27,472.25	79,282.22		191,475.89
Metropolitan water district purchase bonds, Act No. 3204		2,919.95	3,119.13		8,328.05
Public improvement bonds of 1905, 1906, and 1909, Act No. 2425		2,089.79	23,404.74		202,821.20
Public improvement bonds of 1921, Act No. 2940		153,891.72	53,381.40		220,832.80
Provincial and municipal—					
Banigued, Abra, water bonds, Act No. 2838		328.97	553.345		1,435.66
City of Cebu sewer and water bonds, Act No. 2009		944.67	770.91		2,486.49
City of Manila public improvement bonds, Act No. 2894		12,339.67	58,503.05		129,345.77
City of Manila sewer and water bonds, Acts Nos. 1323 and 2832		4,532.75	99,428.05		203,388.85
Majayjay, Laguna, sewer and water bonds, Act No. 2773		322.02	528.355		1,378.73
Santa Cruz, Laguna, sewer and water bonds, Act No. 2773		747.86	1,029.83		2,807.52
Province of Bulacan public improvement bonds, Act No. 3331		221.38	239.20		2,699.78
Province of Camarines Sur public improvement bonds, Act No. 3280		112.48	469.50		1,061.48
Camaligan, Camarines Sur, public improvement bonds, Act No. 3280		96.85			96.85
Canaman, Camarines Sur, public improvement bonds, Act No. 3280		96.85			96.85

Magarao, Camarines Sur, public improvement bonds, Act No. 3280.	290.57	290.57
Naga, Camarines Sur, public improvement bonds, Act No. 3280.	716.73	716.73
Province of Ilocos Norte public improvement bonds, Act No. 3266.	8,806.70	10,748.30
Bacarra, Ilocos Norte, public improvement bonds, Act No. 3266.	133.94	3,472.94
Laag, Ilocos Norte, public improvement bonds, Act No. 3266.	1,754.60	8,470.60
Pasquin, Ilocos Norte, public improvement bonds, Act No. 3266.	197.94	389.94
Province of Ilocos Sur, public improvement bonds, Act No. 3278.	58.34	1,743.39
Vigan, Ilocos Sur, public improvement bonds, Act No. 3278.	1,743.39	3,669.40
Province of Iloilo public improvement bonds, Act No. 3222.	1,655.60	313.04
Cabatuan, Iloilo, public improvement bonds, Act No. 3222.	5.04	783.49
Dingle, Iloilo, public improvement bonds, Act No. 3222.	13.49	511.73
Iloilo, Iloilo, public improvement bonds, Act No. 3222.	508.53	1,575.14
Jaro, Iloilo, public improvement bonds, Act No. 3222.	115.94	1,019.45
La Paz, Iloilo, public improvement bonds, Act No. 3222.	104.25	117.70
Maasin, Iloilo, public improvement bonds, Act No. 3222.	3.70	979.76
Pavia, Iloilo, public improvement bonds, Act No. 3222.	13.76	2,011.28
Pototan, Iloilo, public improvement bonds, Act No. 3222.	203.88	2,002.10
Santa Barbara, Iloilo, public improvement bonds, Act No. 3265.	124.90	1,731.45
Province of Laguna public improvement bonds, Act No. 3268.	203.45	222.28
Province of Marinduque public improvement bonds, Act No. 3268.	211.28	5.60
Province of Nueva Ecija public improvement bonds, Act No. 3268.	355.96	158.80
Province of Occidental Negros public improvement bonds, Act No. 3229.	577.59	1,947.23
Province of Pangasinan public improvement bonds, Act No. 3282.	292.72	1,549.52
Province of Pampanga public improvement bonds, Act No. 3282.	1,276.98	1,750.98
Province of Tarlac public improvement bonds, Act No. 3279.	651.24	2,390.44
Bonds fund:		
Financial interest protection bonds, Act No. 2999.	8.44	10,156.00
Manila port works and improvement bonds, Act No. 2908.	143,516.21	1,383,778.41
Cebu port works and improvement bonds, Act No. 3413.		1,596,000.00
City of Manila lowland improvement bonds, Act No. 3352.	4,189.55	1,052,739.55
Iloilo port works and improvement bonds, Act No. 3417.		1,692,385.00
Province of Bulacan public improvement bonds, Act No. 3331.	8,008.44	391,827.84
Province and four municipalities of Camarines Sur public improvement bonds, Act No. 3280.	801.80	801.80
Province and three municipalities of Ilocos Norte public improvement bonds, Act No. 3278.		49,273.72
Province of Ilocos Sur and municipality of Vigan public improvement bonds, act No. 3222.	6,380.72	322,835.72
Province and nine municipalities of Iloilo public improvement bonds, act No. 3265.	6,089.78	6,089.78
Province of Laguna public improvement bonds, Act No. 3265.		40,355.10
Province of La Union public improvement bonds, Act No. 3281.	1,158.12	53,565.18
Province of Nueva Ecija public improvement bonds, Act No. 3329.	10,631.28	425,940.28
Province of Occidental Negros public improvement bonds, Act No. 3229.	35,694.76	35,694.76
Province of Pampanga public improvement bonds, Act No. 3282.	10,907.42	950,979.08
Province of Tarlac public improvement bonds, Act No. 3279.	3,470.36	117,181.21
Public improvement bonds of 1921, Act No. 2940.	2,543,966.77	7,982,031.57
Special funds:		
Fidelity fund, section 325, Act No. 2711.	48,992.99	48,992.99
Land title assurance fund, Act No. 496.	332,646.07	332,646.07
Loan fund, Acts Nos. 3335 and 3420.	195,590.77	195,590.77
Property insurance fund, section 340, Act No. 2711.	629,098.05	629,098.05
Miscellaneous (other bureaus)	3,476,586.15	4,601,933.15
Fiduciary funds:		
City of Cebu sewer and water bonds, Act No. 2009, interest fund.	8,334.76	8,334.76
City of Manila public improvement bonds, Act No. 2894, interest fund.	378,125.00	378,125.00
City of Manila lowland improvement bonds, Act No. 3352, interest fund.	22,500.00	22,500.00

Statement showing distribution of cash balances—Continued

Names of funds	Cash in treasury vaults		Cash in banks		Total expressed in Philippine currency
	United States currency	Philippine currency	United States currency	Philippine currency	
Fiduciary funds—Continued.					
City of Manila sewer and water bonds, Acts Nos. 1323 and 2832, interest fund		211,426.28			211,426.28
Metropolitan water district bonds, Act No. 3204, interest fund		135,600.39			135,600.39
Municipality of Bangued, Abra, water bonds, Act No. 2838, interest fund		500.00			500.00
Municipality of Santa Cruz, Laguna, sewer and water bonds, Act No. 2773, interest fund		1,125.00			1,125.00
Province of Ilocos Norte public improvement bonds, Act No. 3266, interest fund		17,007.75			17,007.75
Municipality of Bacarra, Ilocos Norte, public improvement bonds, Act No. 3266, interest fund		464.63			464.63
Municipality of Laoag, Ilocos Norte, public improvement bonds, Act No. 3266, interest fund		5,907.37			5,907.37
Municipality of Pasquin, Ilocos Norte, public improvement bonds, Act No. 3266, interest fund					
Province of Iloilo public improvement bonds, Act No. 3222, interest fund		663.75			663.75
Province of Bulacan public improvement bonds, Act No. 3331, interest fund		168.31			168.31
Province of Ilocos Sur public improvement bonds, Act No. 3278, interest fund		21,330.00			21,330.00
Municipality of Vigan, Ilocos Sur, public improvement bonds, Act No. 3278, interest fund		6,012.50			6,012.50
Province of Laguna public improvement bonds, Act No. 3265, interest fund		2,081.25			2,081.25
Province of La Union public improvement bonds, Act No. 3281, interest fund		3,822.00			3,822.00
Province of Marinduque public improvement bonds, Act No. 3268, interest fund		7,397.50			7,397.50
Province of Nueva Ecija public improvement bonds, Act No. 3329, interest fund		2,497.50			2,497.50
Province of Occidental Negros public improvement bonds, Act No. 3229, interest fund		31,050.00			31,050.00
Province of Pangasinan public improvement bonds, Act No. 3282, interest fund		17,842.50			17,842.50
Province of Pangasinan public improvement bonds, Act No. 3228, interest fund		42,930.00			42,930.00
Province of Tarlac public improvement bonds, Act No. 3279, interest fund		19,282.50			19,282.50
Province of Tarlac public improvement bonds, Act No. 2841		7,695.00			7,695.00
Apurri electric light franchise, sec. 9, Act No. 2841				1,427.34	1,427.34
C. B. Carter electric light franchise, sec. 2, Act No. 667				1,170.09	1,170.09
Cavite electric light franchise, sec. 2, Act No. 667					
Calasiao, Pangasinan, Electric Light & Power Co. franchise, sec. 2, Act No. 667		1,000.00			1,000.00
Camiling, Tarlac, Electric Light & Power Co. franchise, sec. 2, Act No. 667		1,000.00			1,000.00
Dagupan, Pangasinan, Electric Light & Power Co. franchise, sec. 2, Act No. 667		1,000.00			1,000.00
Earthquake fund of 1863, Act No. 2109		25,745.92			25,745.92
Gubat, Sorsogon, Electric Light & Power Co. franchise, sec. 2, Act No. 667				1,000.00	1,000.00
Lillo, Laguna, electric light franchise, sec. 2, Act No. 667		1,000.00			1,000.00
Mangaldan, Pangasinan, Electric Light & Power Co. franchise, sec. 2, Act No. 667		1,000.00			1,000.00
Nagardlan, Laguna, electric light franchise, sec. 2, Act No. 667		1,000.00			1,000.00
Oas, Albay, Electric Light & Power Co. franchise, sec. 2, Act No. 667		1,000.00			1,000.00
Pampanga electric light franchise, sec. 9, Act No. 2845		1,000.00			1,000.00
Pulupandan, Isabela Railroad franchise, sec. 27, Act No. 2485		3,000.00			3,000.00
Rizal, Laguna, electric light franchise, sec. 2, Act No. 667		1,000.00			1,000.00
San Jose, Nueva Ecija, Electric Light & Power Co. franchise, sec. 2, Act No. 667		1,000.00			1,000.00
San Isidro, Nueva Ecija, Electric Light & Power Co. franchise, sec. 2, Act No. 667		1,000.00			1,000.00
Silay Electric & Ice Plant Co. franchise, sec. 9, Act No. 2393		1,000.00			1,000.00
Miscellaneous (other bureaus)		259,726.96	2,582,041.78		5,423,810.52
Totals	3,653,835.85	26,393,043.775	75,718,471.15	4,001,609.42	189,139,267.195

Location of cash balances in banks

Bank credits	General fund	Gold stand- ard fund	Treasury cer- tificate fund	Depository funds	Sinking funds	Bonds funds	Special funds	Fiduciary funds	Total
UNITED STATES BANKS									
Chase National Bank, New York City:									
Demand deposits at 3 per cent interest pe annum.....	\$6,854,702.965	\$2,515,644.85	\$3,455,989.00						\$19,248,270.82
Time deposits at 3½ per cent interest per annum.....					\$58.86	\$3,277,159.865	\$562,673.50	\$2,582,041.78	
Atlanta and Lowry National Bank, Atlanta, Ga. ¹		340,000.00	1,605,564.50	\$1,125,000.00	684,159.02	3,214,476.81			6,970,200.33
Baltimore Trust Company, Baltimore, Md. ¹		500,000.00	500,000.00						500,000.00
Bankers Trust Company, New York ¹						500,000.00			1,000,000.00
Bank of Pittsburgh National Association, Pitts- burgh, Pa. ¹			1,500,000.00						1,500,000.00
Central National Bank, Cleveland, Ohio ¹	500,000.00		500,000.00						1,000,000.00
Central Trust Company of Illinois, Chicago, Ill. ¹	500,000.00		500,000.00						1,000,000.00
City National Bank, Knoxville, Tenn. ¹			1,000,000.00						1,000,000.00
Commerce Trust Company, Kansas City, Mo. ¹			500,000.00						500,000.00
Commercial National Bank, Washington, D. C. ¹			1,500,000.00						1,500,000.00
Continental National Bank and Trust Company of Chicago, Ill. ¹			1,000,000.00						1,000,000.00
Croker First National Bank of San Francisco, Calif. ¹			2,000,000.00						2,000,000.00
Farmers Deposits National Bank, Pittsburgh, Pa. ¹		1,000,000.00							1,000,000.00
Farmers' Loan and Trust Company, New York City ¹		500,000.00	500,000.00						1,000,000.00
Fidelity Trust Company of New York, New York City ¹			1,500,000.00						1,500,000.00
First National Bank, Birmingham, Ala. ¹			750,000.00						750,000.00
First National Bank of Boston, Mass. ¹			500,000.00						500,000.00
First National Bank, Philadelphia, Pa. ¹			2,000,000.00						2,000,000.00
First National Bank at Pittsburgh, Pa. ¹			500,000.00						500,000.00
Fourth National Bank of Atlanta, Ga. ¹			1,000,000.00						1,000,000.00
Fulton National Bank of Atlanta, Ga. ¹						500,000.00			500,000.00
Guaranty Trust Company of New York City, N. Y. ¹			500,000.00						500,000.00
Harris Trust and Savings Bank, Chicago, Ill. ¹		1,000,000.00	1,500,000.00						2,500,000.00
Huntington National Bank, Columbus, Ohio ¹			1,000,000.00						1,000,000.00
Illinois Merchants Trust Company, Chicago, Ill. ¹		500,000.00							500,000.00
Los Angeles First National Trust and Savings Bank, San Francisco, Calif. ¹	250,000.00	250,000.00	1,000,000.00						1,500,000.00
Canal Bank and Trust Company, New Orleans, La. ¹	1,000,000.00								1,000,000.00
Mahoning National Bank, Youngstown, Ohio ¹		250,000.00	750,000.00						750,000.00

¹ Time deposits at 3½ per cent per annum.

Location of cash balances in banks—Continued

Bank credits	General fund	Gold stand- ard fund	Treasury cer- tificate fund	Depository funds	Sinking funds	Bonds funds	Special funds	Fiduciary funds	Total
Market Street National Bank, Philadelphia, Pa. ¹			\$1,500,000.00						\$1,500,000.00
Mellon National Bank, Pittsburgh, Pa. ¹	\$250,000.00		1,250,000.00						1,500,000.00
Mercantile Trust Company, St. Louis, Mo. ¹	250,000.00	\$500,000.00				\$1,000,000.00			1,750,000.00
The First National Bank of Baltimore, Md. ¹			500,000.00						500,000.00
National Bank of the Republic, Chicago, Ill. ¹	500,000.00					1,000,000.00			1,500,000.00
National Park Bank, New York, N. Y. ¹						1,000,000.00			1,000,000.00
National Shawmut Bank, Boston, Mass. ¹	250,000.00		1,250,000.00						1,500,000.00
National Union Bank of Maryland at Baltimore, Md. ¹						500,000.00			500,000.00
New York State National Bank, Albany, N. Y. ¹			500,000.00						500,000.00
Old Colony Trust Company, Boston, Mass. ¹			1,000,000.00						1,000,000.00
Penn National Bank, Philadelphia, Pa. ¹		1,000,000.00							1,000,000.00
Philadelphia National Bank, Philadelphia, Pa. ¹			1,000,000.00						1,000,000.00
Riggs National Bank, Washington, D. C. ¹			1,500,000.00						1,500,000.00
Second National Bank, Washington, D. C. ¹			500,000.00						500,000.00
Security Trust and Savings Bank, Los Angeles, Calif. ¹									
State National Bank, St. Louis, Mo. ¹	500,000.00		500,000.00						1,000,000.00
United States National Bank, Portland, Oreg. ¹	500,000.00		500,000.00						1,000,000.00
United States Trust Company, New York City. ¹									
Union Trust Company, Cleveland, Ohio. ¹	500,000.00		1,000,000.00						1,000,000.00
Wells Fargo Bank and Union Trust Company, San Francisco, Calif. ¹			500,000.00			500,000.00			1,500,000.00
Whitney Central National Bank, New Orleans, La. ¹		1,000,000.00							1,000,000.00
		500,000.00							500,000.00
Total	12,354,702.965	9,855,644.85	37,002,553.50	\$1,125,000.00	\$684,217.88	11,401,636.675	\$562,673.50	\$2,582,041.78	75,718,471.15
PHILIPPINE BANKS									
Philippine National Bank, Manila:									
Fixed deposits at 4 per cent interest per annum				P 66,752.31				P 3,597.43	P 70,349.74
Current accounts	P 3,743,714.08								3,743,714.08
Special account	187,545.00								187,545.00
Total	3,931,259.08			66,752.31				3,597.43	4,001,609.42

¹ Time deposits at 3½ per cent per annum.

SPECIAL FUNDS

Land title assurance fund, Act No. 496.—The purpose of this fund is to reimburse anyone who may lose title to property under the circumstances specified in Act No. 496.

The income of the fund is derived from percentage fees on lands registered and from interest and dividends on investments.

No claim against the fund was paid during the year under review.

Property insurance fund, Act No. 2711 (sec. 336 to 341).—This fund has for its purpose the insurance of government vessels and crafts, government machinery, permanent public buildings, government property stored therein, and government property stored in rented buildings, against destruction or damage resulting from fire, earthquake, storm, or other casualty.

With the exception of the properties of the insular government for which the law provides insurance free of charge without formality of any sort, all other properties belonging to a Province, city, municipality or other local political division, are insured only upon application made by the proper board and council of the Province and city or municipality, respectively, and the approval thereof by the secretary of finance. The premium rates for insurance are fixed by the insular treasurer with the approval also of the secretary of finance.

The income of the fund consists of premiums on insurance, profits from investments, and a continuing annual appropriation. Should the total claims against the fund exceed the capital, surplus, and reserves pertaining thereto, the amount necessary to cover the deficit shall be advanced from the general fund.

The claims against the property insurance fund, paid during the year, amounted to ₱22,913.49 or ₱5,732.60 less than those paid during 1927. The particulars of the claims are as follows:

Province of Batangas—Total loss of the Provincial trade school building by fire-----	₱10,000.00
Province of Cagayan—Damages to the Aparri intermediate school building caused by typhoon-----	170.26
Province of Cagayan—Total loss of the Aparri municipal building by fire-----	11,049.08
Province of Ilocos Norte—Damages to the Cadaratan school building Bacarra, caused by typhoon-----	46.29
Province of Lagune—Damages to the Provincial Government building caused by typhoon-----	1,224.43
Bureau of posts—Damages to the Lavezares post office, Samar, caused by fire-----	57.29
Bureau of posts—Damages to the Sarabia post office, Occidental Negros, caused by fire-----	366.14
Total-----	22,913.49

Fidelity bond premium fund, Act No. 2711 (secs. 315 to 335).—This fund was established for the purpose of insuring the fidelity of officers and employees of the government and of officers, agents or employees of companies or corporations the majority of the stock of which is held by the insular government, and is available not only for replacing defalcations, shortages and unrecovered losses, but also for paying the expenses of administration and operation of the fund.

The receipts of the fund consist of premiums, profits on investments, and sums recovered from defaulters.

Section 325 of Act No. 2711 provides that this fund shall be constituted and maintained as a permanent reimbursable fund, at an amount not to exceed ₱100,000 and that any excess over such limit shall revert to the general fund.

Act No. 3373, amending section 322 of Act No. 2711, provides that the bureau, office, Province, municipality, or other branch of the government to which the officers and employees insured pertain shall pay the whole premium on the bonds of said officers and employees.

DEPOSITORY FUND

Among the various accounts grouped under "Depository funds," the following are the most important:

Treasurer of the United States account.—This account represents funds deposited by the Treasurer of the United States with the Chase National Bank, New York City, to the credit of the treasurer of the Philippine Islands to meet the expenses of the United States Government in the Philippine Islands.

The total amount thus deposited during the year amounted to ₱27,000,000 (\$13,500,000) as compared with ₱26,000,000 (\$13,000,000) in 1927. The outstanding balance on December 31, 1928, was ₱1,216,002.20 (\$608,001.10) as against ₱1,407,736.74 (\$703,868.37) on December 31, 1927.

Manila Railroad Co. southern lines bonds sinking fund account, Act No. 2574.—This sinking fund was established by the Manila Railroad Co. and is deposited with the Philippine National Bank to the credit of the insular treasurer as an investment. It is for the redemption of those Manila Railroad Co. southern lines bonds, whose maturity has been extended to the year 1959 under the provisions of Act No. 2574.

The balance of the fund on December 31, 1928, amounted to ₱60,285.47.

FIDUCIARY FUNDS

Among the various accounts grouped under fiduciary fund, the following is the most important:

Earthquake fund of 1863 account.—This account represents funds recovered from the Monte de Piedad of Manila through court proceedings, and are now held in the treasury vaults ready for distribution among those damaged by the earthquake of June 3, 1863.

The balance of this fund amounting to ₱25,745.92 on December 31, 1927, remained the same at the close of business on December 31, 1928.

The original amount deposited by the government in 1863 in the Monte de Piedad was Pfs. 80,000 gold which, together with accrued interest, amounted to ₱108,939.77. The total amount distributed among the parties concerned, in compliance with court's orders, was ₱83,193.85 as follows:

1918	₱659.00
1919	78,545.28
1920	3,887.59
1921	39.48
1922	23.03
1923	39.47
Total	83,193.85

GOLD STANDARD FUND (ACT NO. 3058)

The function of the gold standard fund is to maintain the parity of the Philippine silver peso with the theoretical Philippine gold peso, the latter being the unit of value in the Philippine Islands, consisting of 12.9 grains of gold, nine-tenths fine.

The operation of the Philippine Mint during the year 1928 was undertaken by this fund.

The gold standard fund netted a gain of ₱3,399,017.17 during the year as compared with ₱3,071,233.10 in 1927. The receipts of the gold standard fund proper amounted to ₱3,466,214.30 as against ₱3,179,228.53 in 1927. The increase was due to larger amounts of interest received on gold standard fund and treasury certificate fund deposits with banks in the United States and of premiums collected on exchange sold during the year under review. The total expenses amounted to ₱67,197.13 or ₱40,798.30 less than the total expenses in 1927. This decrease was brought about chiefly by the reduction of the amount paid for printing treasury certificates to approximately one-half of that paid the previous year.

The receipts of the gold standard fund during the year on account of the operation of the mint, amounted to ₱141,511 while the expenses were ₱74,172.80 only, thereby netting a gain of ₱67,338.20. This profit is based on actual disbursement, overhead and depreciation expenses having been disregarded.

Constitution of the gold standard fund.—Sections 1622 and 1624 of Act No. 2711 as amended by Act No. 3058 provide among other things that:

"Section 1622. * * * the 'gold standard fund,' shall at all times be maintained in a sum not less than fifteen per centum of the money of the Government of the Philippine Islands in circulation and available for circulation, including both coin and treasury certificates. If at any time and for any reason said fund shall fall below the minimum hereinabove fixed, the deficiency shall be made up out of any funds then in the Insular Treasury or thereafter paid in the Treasury, not specifically appropriated to meet the

payment of the principal, sinking fund, or interest of the public debt, and such amount shall be considered as automatically appropriated for this purpose, and the Insular Treasurer is hereby authorized and directed to transfer the necessary amount to the 'gold standard fund' to make good any such deficiency therein.

"Section 1624. * * *.

"The 'gold standard fund' shall be increased in amount through the additions provided for in section sixteen hundred and twenty-two of this act until the amount of the said fund shall be equal to twenty-five per centum of the money of the Philippine Islands in circulation and available for circulation, including both coin and Treasury certificates."

The cash balance of the gold standard fund amounted on December 31, 1928, to ₱27,460,300.85 which represents about 24.1 per cent of the money of the Philippine Islands in circulation and available for circulation or about nine-tenths per cent of less than the required 25 per cent maximum of the fund, as follows:

Circulation:		
Total coinage	₱40,255,525.07	
Less coins held in treasury vaults belonging to the gold standard fund and treasury certificate fund not considered as available for circulation under section 1625(f) of Act No. 3058	18,291,239.45	₱21,964,285.62
Outstanding treasury certificates	91,975,007.00	
Less treasury certificates in treasury vaults belonging to the gold standard fund not considered as available for circulation under section 1625(f) of Act No. 3058		91,975,007.00
Total government money in circulation and available thereof		113,939,292.62
Minimum limit: 15 per cent of the above amount		17,090,893.89
Maximum limit: 25 per cent of the above amount		28,484,823.15

Gold standard fund cash surplus available

Cash in Treasury vaults:		
Philippine currency—Coins	₱4,141,339.45	
United States currency (\$1,803,835.85)	3,607,671.70	₱7,749,011.15
On deposit with authorized depositories in the United States:		
Chase National Bank, New York City (demand)	\$2,515,644.85	
Chase National Bank, New York City (time)	340,000.00	
Baltimore Trust Co., Baltimore, Md. (time)	500,000.00	
Crocker First National Bank of San Francisco, Calif. (time)	1,000,000.00	
Farmers Deposit National Bank, Pittsburgh, Pa. (time)	500,000.00	
Guaranty Trust Co. of New York, N. Y. (time)	1,000,000.00	
Huntington National Bank, Columbus, Ohio (time)	500,000.00	
Illinois Merchants Trust Co., Chicago, Ill. (time)	250,000.00	
Mahoning National Bank, Youngstown, Ohio (time)	250,000.00	
Mercantile Trust Company, St. Louis, Mo. (time)	500,000.00	
Penn National Bank, Philadelphia, Pa. (time)	1,000,000.00	
Wells Fargo Bank and Union Trust Co., San Francisco, Calif. (time)	1,000,000.00	
Whitney Central National Bank, New Orleans, La. (time)	500,000.00	
	9,855,644.85	19,711,289.70
Total cash surplus on December 31, 1928		27,460,300.85
Excess over legal minimum		10,369,406.96
Minimum limit		17,090,893.89
Total cash surplus on December 31, 1928		27,460,300.85
Deficiency of the fund to reach the legal maximum		1,024,522.30
Maximum limit		28,484,823.15

TREASURY CERTIFICATE FUND

This fund takes care of the redemption at par of the treasury certificates issued. Its balance amounted to ₱91,975,007 on December 31, 1928. This amount represents the 100 per cent of all treasury certificates in circulation and available for circulation. It consists of silver coins to the amount of ₱14,149,900 and United States gold coins in the sum of ₱3,700,000 (\$1,850,000) and of gold deposits in member banks of the Federal reserve system in the United States to the amount of ₱74,125,107 (\$37,062,553.50).

CIRCULATION

The circulation of the islands on December 31, 1928, consisted of the following :

Treasury certificates:			
Issued.....			₱91,975,007.00
Less—			
Amount held in treasury vaults pertaining to governmental funds.....	₱7,571,975.00		
Amount destroyed, estimated.....	350,000.00		
		7,921,975.00	
Net Treasury certificates in circulation.....			₱84,053,032.00
Philippine coins:			
Issued—			
Silver pesos.....	₱22,307,601.00		
Half silver pesos.....	6,272,721.00		
Subsidiary coins.....	8,952,374.20		
Minor coins.....	2,722,828.87		
		40,255,525.07	
Less—			
Amount held in treasury vaults pertaining to governmental funds:			
Silver pesos.....	₱16,167,868.00		
Half silver pesos.....	2,186,506.50		
Subsidiary coins.....	21,626.60		
Minor coins.....	106,243.425		
Amount destroyed, estimated.....	100,000.00		
		18,582,244.525	
Net Philippine coins in circulation.....			21,673,280.545
Bank notes:			
Issued to—			
Bank of the Philippine Islands.....	₱8,989,372.50		
Less—			
Notes held in the bank vaults....	₱9,205.00		
Amount destroyed, estimated....	40,000.00		
		49,205.00	
			8,940,167.50
Philippine National Bank.....	15,555,478.70		
Less—			
Notes held in the bank vaults. ₱451,401.20			
Amount destroyed, estimated. 150,000.00			
		601,401.20	
		14,954,077.50	
Total bank notes in circulation.....			23,894,245.00
Total circulation.....			129,620,557.545

Table showing the per capita circulation of the Philippine Islands

Year	Circulation	Population ¹	Per capita circulation
1924.....	₱123,979,980.69	11,615,589	10.67
1925.....	132,201,572.785	11,847,899	11.16
1926.....	123,645,269.025	12,108,688	10.21
1927.....	127,446,089.125	12,350,800	10.31
1928.....	129,620,557.545	12,597,800	10.29

¹ Population estimated only, based on the 1918 census and at a yearly increase of about 2 per cent.

PUBLIC DEBT

The public debt consists of the following:

Bonds of the insular government proper, including Friar lands bonds.....	₱152, 600, 000
Bonds of the insular government secured by bonds of the provincial, municipal, and other government entities.....	14, 217, 000
Bonds of the provincial and municipal governments sold to public.....	8, 420, 000
Bonds of the provincial, municipal, and other government entities securing insular government bonds.....	14, 217, 000
Total.....	189, 454, 000

From the above amount the sum of ₱14,217,000 collateral bonds issued against provincial and municipal bonds should be deducted, leaving a net bonded indebtedness of the Philippine government of ₱175,237,000 only, for which there are accumulated sinking funds in the sum of ₱43,518,211.43 on December 31, 1928.

From the subjoining table it will be seen that the bonded indebtedness has increased by ₱7,252,000. This increase was caused by the sale of ₱1,500,000 Cebu port works and improvement bonds, Act No. 3413; ₱1,500,000 Iloilo port works and improvements bonds, Act No. 3417; and ₱4,252,000 provincial and municipal collateral bonds issued under the authority of Acts Nos. 3278, 3279, 3280, 3281, 3282, 3329, 3331, and 3352.

In spite of the additional sale of bonds under Acts Nos. 3413 and 3417, the interest together with exchange premiums at the rate of seven-eighths of 1 per cent paid by the government on account of the insular bonded indebtedness during the year 1928 was ₱6,369,261.06 only as compared with ₱6,959,644.26 paid in 1927, or a decrease of ₱590,383.20. This decrease was due to the cancellation of insular bonds in the amount of ₱15,720,000 under Act No. 3014.

The following are the bonds canceled under Act No. 3014:

Purely insular bonds:	
Land purchase (friar).....	₱3, 766, 000
Public improvement of 1905, 1906, and 1909.....	4, 062, 000
Manila Railroad Co. purchase.....	1, 474, 000
Manila port works and improvement.....	442, 000
Public improvement of 1921.....	116, 000
Financial interest protection.....	238, 000
Currency.....	3, 652, 000
Irrigation and permanent public works (sundry).....	1, 970, 000
	₱15, 720, 000
Other bonds:	
Manila sewer and waterworks.....	3, 416, 000
City of Manila collateral.....	244, 000
Cebu waterworks.....	40, 000
	3, 700, 000
Total bonds canceled.....	19, 420, 000

Bonded indebtedness

Issue	Amount
Insular bonds:	
4 per cent loan of 1904 (1914-1934) land purchase bonds, Acts No. 1034, 1749, and 2550....	₱14, 000, 000. 00
4 per cent loan of 1905 (1915-1935) first series, public improvement bonds, Acts Nos. 1301 and 1729.....	5, 000, 000. 00
4 per cent loan of 1906 (1916-1936) second series, public improvement bonds, Acts Nos. 1441, 1449, and 1729.....	2, 000, 000. 00
4 per cent loan of 1909 (1919-1929) third series, public improvement bonds, Act No. 1954.....	3, 000, 000. 00
4 per cent loan of 1916 (1926-1946) Manila Railroad Co. purchase bonds, Acts Nos. 2615, 2624, and 2625.....	8, 000, 000. 00
5½ per cent loan of 1920 (1930-1950) Manila port works and improvement bonds, Act No. 2908.....	12, 000, 000. 00
5½ per cent loan of 1921 (due 1941) public improvement bonds, Act No. 2940 (irrigation and public works).....	20, 000, 000. 00
5 per cent loan of 1922 (due 1952) financial interest protection bonds, Act No. 2999.....	10, 000, 000. 00
4½ per cent loan of 1922 (due 1952) irrigation and permanent public works bonds (Sundry), Act No. 3013—	
First sale.....	10, 000, 000. 00
Second sale.....	4, 500, 000. 00
Third sale.....	1, 500, 000. 00
Fourth sale.....	3, 000, 000. 00
Fifth sale.....	1, 500, 000. 00
Sixth sale.....	2, 000, 000. 00
Seventh sale.....	1, 100, 000. 00

Bonded indebtedness—Continued

Issue	Amount
Insular bonds—Continued.	
4½ per cent gold loan of 1922 (due 1952) currency bonds, Act No. 3058—	
First sale.....	P20,000,000.00
Second sale.....	26,000,000.00
5 per cent loan of 1925 (1935-1955) metropolitan water district purchase bonds, Act No. 3204—	
First sale.....	2,000,000.00
Second sale.....	500,000.00
Third sale.....	3,000,000.00
Fourth sale.....	500,000.00
4½ per cent loan of 1928 (due 1958) Cebu port works and improvement bonds, Act No. 3413.....	1,500,000.00
4½ per cent loan of 1928 (due 1958) Iloilo port works and improvement bonds, Act No. 3417.....	1,500,000.00
Total insular bonds.....	152,600,000.00
Insular bonds secured by provincial and municipal bonds.	
4½ per cent loan of 1922 (due 1950) city of Manila public improvement collateral bonds, Act No. 3051.....	5,500,000.00
4½ per cent loan of 1926 (1936-1956) Province of Iloilo and 9 municipalities permanent public improvement collateral bonds, Act 8222.....	1,953,000.00
4½ per cent loan of 1926 (due 1956) Province of Pangasinan permanent public improvement collateral bonds, Act No. 3228.....	857,000.00
4½ per cent loan of 1926 (due 1956) Province of Occidental Negros permanent public improvement collateral bonds, Act No. 3229.....	800,000.00
4½ per cent loan of 1926 (due 1956) Province of Ilocos Norte and 3 municipalities permanent public improvement collateral bonds, Act No. 3266.....	548,000.00
4½ per cent loan of 1925 (due 1956) Province of Marinduque permanent public improvement collateral bonds, Act No. 3268.....	111,000.00
4½ per cent loan of 1927 (due 1957) Province of Laguna permanent public improvement collateral bonds, Act No. 3265.....	196,000.00
4½ per cent loan of 1927 (due 1957) Province of Ilocos Sur and municipality of Vigan permanent improvement collateral bonds, Act No. 3278.....	350,000.00
4½ per cent loan of 1927 (due 1957) Province of Tarlac permanent improvement collateral bonds, Act No. 3279.....	342,000.00
4½ per cent loan of 1927 (due 1957) Province and 4 municipalities of Camarines Sur permanent improvement collateral bonds, Act No. 3280.....	222,000.00
4½ per cent loan of 1927 (due 1957) Province of Pampanga permanent improvement collateral bonds, Act No. 3282.....	954,000.00
4½ per cent loan of 1927 (due 1957) Province of Nueva Ecija permanent improvement collateral bonds, Act No. 3329.....	690,000.00
4½ per cent loan of 1927 (due 1957) Province of Bulacan permanent improvement collateral bonds, Act No. 3331.....	474,000.00
4½ per cent loan of 1925 (due 1958) Province of La Union permanent improvement collateral bonds, Act No. 3281.....	220,000.00
4½ per cent loan of 1928 (due 1958) city of Manila lowland improvement collateral bonds, Act No. 3352.....	1,000,000.00
Total insular bonds secured by provincial and municipal bonds.....	14,217,000.00
Provincial and municipal government bonds sold to public:	
4 per cent loan of 1905 (1915-1935), first series, Manila sewer and waterworks bonds, Acts Nos. 1323 and 2832.....	2,000,000.00
4 per cent loan of 1907 (1917-1937), second series, Manila sewer and waterworks bonds, Acts Nos. 1323 and 2832.....	4,000,000.00
4 per cent loan of 1908 (1918-1938), third series, Manila sewer and waterworks bonds, Acts Nos. 1323 and 2832.....	2,000,000.00
4 per cent loan of 1911 (1921-1941) city of Cebu sewer and waterworks bonds, Act No. 2009.....	250,000.00
5 per cent loan of 1919 (1929-1949) Santa Cruz, Laguna, sewer and waterworks bonds, Act No. 2773.....	90,000.00
5 per cent loan of 1919 (1929-1949) Majayjay, Laguna, sewer and waterworks bonds, Act No. 2773.....	40,000.00
5 per cent loan of 1919 (1929-1949) Bangued, Abra, sewer and waterworks bonds, Act No. 2838.....	40,000.00
Total of provincial and municipal governments bonds sold to public.....	8,420,000.00
Provincial and municipal bonds securing insular bonds:	
5½ per cent loan of 1920 (1930-1950) city of Manila permanent improvement bonds, Act No. 2894.....	5,500,000.00
4½ per cent loan of 1926 (1936-1956) Province of Iloilo and 9 municipalities permanent public improvement bonds, Act No. 3222—	
Province of Iloilo.....	1,121,000.00
Municipality of Iloilo.....	338,000.00
Municipality of Cabatuan.....	8,000.00
Municipality of Jaro.....	94,000.00
Municipality of La Paz.....	80,000.00
Municipality of Maasin.....	3,000.00
Municipality of Pavia.....	25,000.00
Municipality of Santa Barbara.....	104,800.00
Municipality of Dingle.....	20,000.00
Municipality of Pototan.....	159,200.00

Bonded indebtedness—Continued

Issue	Amount
Provincial and municipal bonds securing insular bonds—Continued.	
4½ per cent loan of 1926 (due 1956) Province of Pangasinan permanent public improvement bonds, Act No. 3228-----	P857,000.00
4½ per cent loan of 1926 (due 1956) Province of Occidental Negros permanent public improvement bonds, Act No. 3229-----	800,000.00
4½ per cent loan of 1926 (due 1956) Province of Ilocos Norte and 3 municipalities permanent public improvement bonds, Act No. 3266—	
Province of Ilocos Norte-----	442,000.00
Municipality of Bacarra-----	7,000.00
Municipality of Laoag-----	89,000.00
Municipality of Pasuquin-----	10,000.00
4½ per cent loan of 1926 (due 1956) Province of Marinduque permanent public improvement bonds, Act No. 3268-----	111,000.00
4½ per cent loan of 1927 (due 1957), Province of Laguna permanent public improvement bonds, Act No. 3265-----	196,000.00
4½ per cent loan of 1927 (due 1957), Province of Ilocos Sur and municipality of Vigan permanent improvement bonds, Act No. 3278—	
Province of Ilocos Sur-----	260,000.00
Municipality of Vigan-----	90,000.00
4½ per cent loan of 1927 (due 1957), Province of Tarlac permanent improvement bonds, Act No. 3279-----	342,000.00
4½ per cent loan of 1927 (due 1957), Province and 4 municipalities of Camarines Sur permanent improvement bonds, Act No. 3280—	
Province of Camarines Sur-----	160,000.00
Municipality of Naga-----	37,000.00
Municipality of Magarao-----	15,000.00
Municipality of Canaman-----	5,000.00
Municipality of Camaligan-----	5,000.00
4½ per cent loan of 1927 (due 1957), Province of Pampanga permanent improvement bonds, Act No. 3282-----	954,000.00
4½ per cent loan of 1927 (due 1957), Province of Nueva Ecija permanent improvement bonds, Act No. 3329-----	690,000.00
4½ per cent loan of 1927 (due 1957), Province of Bulacan permanent improvement bonds, Act No. 3331-----	474,000.00
4½ per cent loan of 1928 (due 1958), Province of La Union permanent improvement bonds, Act No. 3281-----	220,000.00
4½ per cent loan of 1928 (due 1958), city of Manila lowland improvement bonds, Act No. 3352-----	1,000,000.00
Total of provincial and municipal bonds securing insular bonds-----	14,217,000.00
Total of all bonded indebtedness-----	189,454,000.00

Adequate legislation provides for sinking funds to redeem the bonds at maturity. The accretions of the sinking funds consist of the interest derived from investments and of the annual allotments from the insular government, cities and municipalities concerned, and from the metropolitan water district.

The sinking funds at the close of the year were as follows:

Insular bonds:

Land purchase bonds sinking fund, Acts Nos. 2550 and 2592-----	P10,262,945.69
Public improvement bonds sinking fund, Act No. 2425-----	6,281,821.20
Manila Railroad Co. purchase bonds sinking fund, Act No. 2625-----	2,269,475.39
Manila port works and improvement bonds sinking fund, Act No. 2908-----	2,128,666.59
Public improvement bonds of 1921 sinking fund, Act No. 2940-----	5,582,002.26
Irrigation and permanent public works bonds sinking fund, Act No. 3013-----	3,046,893.30
Financial interest protection bonds sinking fund, Act No. 2999-----	1,309,560.59
Currency bonds sinking fund, Act No. 3058-----	5,930,348.00
Metropolitan water district purchase bonds sinking fund, Act No. 3204-----	334,093.87
Total reserve for insular bonds-----	37,145,806.89

Provincial and municipal bonds:

Manila sewer and waterworks bonds sinking fund, Act No. 1323-----	5,071,531.35
City of Manila public improvement bonds sinking fund, Act No. 2894-----	945,141.27
Cebu sewer and waterworks bonds sinking fund, Act No. 2009-----	104,486.49
Santa Cruz, Laguna, sewer and waterworks bonds sinking fund, Act No. 2773-----	16,807.52
Majayjay, Laguna, sewer and waterworks bonds sinking fund, Act No. 2773-----	7,378.73
Bangued, Abra, waterworks bonds sinking fund, Act No. 2838-----	7,435.66
Province and nine municipalities of Iloilo public improvement bonds sinking fund, Act No. 3222-----	72,983.09
Province of Pangasinan public improvement bonds sinking fund, Act No. 3228-----	31,750.98

Provincial and municipal bonds—Continued.

Province of Occidental Negros public improvement bonds sinking fund, Act No. 3229	₱29,947.23
Province and three municipalities of Ilocos Norte public improvement bonds sinking fund, Act No. 3266	20,881.78
Province of Marinduque public improvement bonds sinking fund, Act No. 3268	4,222.28
Province of Laguna public improvement bonds sinking fund, Act No. 3265	3,731.45
Province of Ilocos Sur and municipality of Vigan public improvement bonds sinking fund, Act No. 3278	6,540.93
Province of Tarlac public improvement bonds sinking fund, Act No. 3279	6,390.44
Province and four municipalities of Camarines Sur public improvement bonds sinking fund, Act No. 3280	4,252.48
Province of Pampanga public improvement bonds sinking fund, Act No. 3282	17,549.52
Province of Nueva Ecija public improvement bonds sinking fund, Act No. 3329	12,673.56
Province of Bulacan public improvement bonds sinking fund, Act No. 3331	8,699.78
Total reserve for provincial and municipal bonds	6,372,404.54
Grand total	43,518,211.43

The following statement shows the per capita indebtedness of the Philippine Islands from 1924 to 1928:

Year	Amount of indebtedness of the insular government	Population ¹	Per capita indebtedness
1924	₱139,000,000	11,615,589	₱11.96
1925	146,100,000	11,847,899	12.33
1926	146,100,000	12,108,688	12.06
1927	149,600,000	12,350,800	12.11
1928	152,600,000	12,597,800	12.11

¹ Population estimated only, based on the 1918 census at a yearly increase of about 2 per cent.

INVESTMENTS

The following statement shows the status of the investments on December 31, 1927 and 1928, made from different funds under the control and custody of the insular treasurer:

Title of accounts and funds	Amount invested on—	
	Dec. 31, 1927	Dec. 31, 1928
General fund	₱69,159,159.39	₱74,491,351.67
Sinking funds:		
Land purchase bonds, Act No. 1749	8,990,000.00	9,997,000.00
Public improvement bonds of 1905, 1906, and 1909, Act No. 2425	5,549,000.00	6,079,000.00
Manila Railroad purchase bonds, Act No. 2625	1,846,000.00	2,078,000.00
Manila port works and improvement bonds, Act No. 2908	1,442,000.00	1,842,000.00
Public improvement bonds of 1921, Act No. 2940	3,677,000.00	5,397,000.00
Financial interest protection bonds, Act No. 2999	446,000.00	1,165,000.00
Currency bonds, Act No. 3058	3,914,000.00	5,708,000.00
Irrigation and permanent public works bonds, Act No. 3013	2,492,000.00	2,890,000.00
Metropolitan water district purchase bonds, Act No. 3204		332,000.00
City of Manila improvement bonds, Act No. 2894	356,000.00	820,000.00
Cebu waterworks bonds, Act No. 2009	50,000.00	102,000.00
Santa Cruz, Laguna, waterworks bonds Act No. 2773		14,000.00
Majayjay, Laguna, waterworks bonds, Act No. 2773		6,000.00
Bangued, Abra, waterworks bonds, Act No. 2838		6,000.00
Province and three municipalities of Ilocos Norte improvement bonds, Act No. 3266		6,000.00
Province and 9 municipalities of Iloilo improvement bonds, Act No. 3222		60,000.00
Province of Marinduque improvement bonds, Act No. 3268		4,000.00
Province of Occidental Negros improvement bonds, Act No. 3229		28,000.00
Province of Pangasinan improvement bonds, Act No. 3228		30,000.00
Province of Laguna improvement bonds, Act No. 3265		2,000.00
Province of Bulacan improvement bonds, Act No. 3331		8,000.00
Manila sewer and waterworks bonds, Act No. 1323	4,239,452.50	4,863,832.50

Title of accounts and funds	Amount invested on —	
	Dec. 31, 1927	Dec. 31, 1928
Sinking funds—Continued.		
Province and 4 municipalities of Camarines Sur improvement bonds, Act No. 3280.....		P2,000.00
Province of Ilocos Sur and municipality of Vigan improvement bonds, Act No. 3278.....		4,000.00
Province of Nueva Ecija improvement bonds, Act No. 3329.....		12,000.00
Province of Pampanga improvement bonds, Act No. 3282.....		16,000.00
Province of Tarlac improvement bonds, Act No. 3279.....		4,000.00
Manila Railroad Co. southern lines bonds, Act No. 2574.....	P53,645.47	60,285.47
Special funds:		
Land title assurance fund, Act No. 496.....	67,297.60	67,297.60
Fidelity bond premium fund, sections 313-335, Act No. 2711.....	45,000.00	45,000.00
Loan fund account, Acts Nos. 3335 and 3420.....	778,000.00	3,314,880.67
Total.....	103,104,554.96	119,454,647.91

The increase of ₱16,350,092.95 is due mainly to the purchase of provincial and municipal bonds in accordance with the provisions of Acts Nos. 3278, 3279, 3280, 3281, 3282, 3329, 3331, and 3352; to the loans granted to Provinces and municipalities under Acts Nos. 3335 and 3420; to the additional subscription to the stocks of the Manila Railroad Co. under Act No. 3484; to further investments of the various sinking funds in Philippine Government bonds; and to advances to Philippine Railway Co.

Bonds in the total amount of ₱19,420,000 canceled under the provisions of Act. No. 3014 are still carried as investments of the sinking funds concerned pursuant to section 2 of said act.

GUARANTY OF INTEREST ON BOND ISSUES OF RAILWAY CORPORATIONS

Under authority of an act of Congress approved February 6, 1905, the insular government guarantees 4 per cent interest, for a period not to exceed 30 years, on the first-lien bonds issued by the Philippine Railway Co. for the construction of certain lines in the islands of Panay and Cebu, and on the 4 per cent first-lien bonds of what are known as the southern lines of the Manila Railroad Co.

On February 16, 1922, the Manila Railroad Co. again voted to issue 7 per cent sinking fund bonds in the sum of \$1,500,000, to mature on May 1, 1937, for the purpose of paying certain indebtedness, for the construction of certain lines, and to provide for a sinking fund to pay such bonds and interest thereon. To guarantee both the principal and interest of this issue, the Philippine Legislature passed Act No. 3008, on February 28, of the same year.

The total of the combined issues of said companies on December 31, 1928, amounted to \$22,884,000 United States currency.

REJECTED AGRICULTURAL BANK LOANS

The outstanding loans on December 31, 1928, aggregated ₱53,310.95 and represent loans rejected by the Philippine National Bank at the time said bank took over the assets and liabilities of the late agricultural bank in accordance with the provisions of section 6 of Act No. 2747, as amended by Act No. 2938, and those that have been subsequently returned by the Philippine National Bank as uncollectible, pursuant to section 7 of the above-mentioned act, as amended. During the year, no loan was returned by the Philippine National Bank.

The following is a complete list of the outstanding loans at the close of business on December 31, 1928:

Loan No.	Principal	Interest	Total
262.....	P15,000.00	P2,983.64	P17,983.64
275.....	6,000.00	1,019.15	7,019.15
417.....	7,500.00	386.62	7,886.62
510.....	317.28		317.28
873.....	11,000.00	4,624.86	15,624.86
983.....	4,479.40		4,479.40
Total.....	44,296.68	9,014.27	53,310.95

MINT OF THE PHILIPPINE ISLANDS

The mint was operated during the whole year of 1928 for the manufacture of 1-centavo, 5-centavo and 20-centavo coins. Its output during the year amounting to ₱161,500 consisted of ₱91,500 1-centavo, ₱50,000 5-centavo and ₱20,000 20-centavo pieces with a total cost of production of ₱84,429.59. The ₱20,000 20-centavo pieces represent the amount recoined during the year. The ratio of expenses to income is approximately 52 per cent as against 59 per cent during 1927.

BANKS AND BANKING

The following banks and trust companies were engaged in business during the year:

Domestic.—Philippine National Bank, Manila, with branches at Iloilo, Iloilo; Cebu, Cebu; Lagaspi, Albay; Lucena, Tayabas; Cabantuan, Nueva Ecija; Dagupan, Pangasinan; Davao, Davao; and Bacolod, Occidental Negros; and an agency in New York City, N. Y., U. S. A.

Bank of the Philippine Islands, Manila, with branches at Iloilo, Iloilo; Cebu, Cebu; and Zamboanga, Zamboanga.

China Banking Corporation, Manila, with a branch at Amoy, China.

Mercantile Bank of China, Manila.

Monte de Piedad & Savings Bank, Manila.

The Philippine Trust Co., Manila.

Postal Savings Bank, Manila.

The Peoples Bank & Trust Co., Manila, with a branch at San Pablo, Laguna.

Foreign.—International Banking Corporation, branch at Manila, with sub-agency at Cebu, Cebu.

Hong Kong & Shanghai Banking Corporation, branch at Manila, with sub-agency at Iloilo, Iloilo.

Chartered Bank of India, Australia & China, branch at Manila, with sub-agencies at Cebu, Cebu; Iloilo, Iloilo; and Zamboanga, Zamboanga.

The Yokohama Specie Bank (Ltd.), branch at Manila.

The banks and trust companies operating on December 31, 1928, were the same banks reported on December 31, 1927.

CONDITION OF BANKS AND TRUST COMPANIES

The total resources of banks and trust companies on December 31, 1928, aggregated ₱272,392,088.37 as compared with ₱256,392,742.90, the amount reported on December 31, 1927, or an increase of more than ₱15,999,000.

The paid-in capital stock shows an apparent decrease of ₱321,750 when in fact there was an actual increase of ₱678,250. The reduction is accounted for by the elimination from the capital stock account of the sum of ₱1,000,000 representing the working capital assigned to the local branch of one of the foreign banks, and the transfer of same to the account, "Due to head office, branches, agencies, and correspondents."

The deposit liabilities, including cashier's and certified checks, and the amount due to local banks aggregated ₱170,778,032.79 as compared with ₱152,659,682.94 on December 31, 1927. The increase in demand, time, and savings deposits alone amounted to ₱17,611,301.02.

	December 31—		(+) Increase or (-) decrease over previous year
	1927	1928	
RESOURCES			
Loans and discounts.....	₱92,004,907.60	₱109,308,936.69	+ ₱17,304,029.09
Overdrafts.....	47,513,713.93	60,200,522.70	+12,686,808.77
Stocks, securities, etc.....	13,877,993.89	12,247,640.47	-1,630,353.42
Banking house, furniture and fixtures.....	2,488,723.09	2,387,478.15	-101,244.94
Other real estate and mortgages owned.....	3,447,221.28	3,054,533.65	-392,687.63
Due from head office, branches, agents, and correspondents.....	35,911,016.93	34,536,818.08	-1,374,198.85
Due from other banks.....	7,942,849.70	8,198,375.22	+255,525.52
Bills of exchange.....	17,391,502.73	18,347,693.92	+956,191.19
Cash on hand.....	27,998,566.47	15,224,112.88	-12,774,453.59

	December 31—		(+) Increase or (-) decrease over previous year
	1927	1928	
RESOURCES—continued			
Checks and other cash items.....	P1, 370, 189. 47	P1, 413, 381. 70	+ P43, 192. 23
Profit and loss accounts.....	20, 240. 57	1, 003, 316. 41	+983, 075. 84
Resources other than those above.....	6, 425, 817. 24	6, 469, 278. 50	+43, 461. 26
Total.....	256, 392, 742. 90	272, 392, 088. 37	+15, 999, 345. 47
LIABILITIES			
Capital stock.....	25, 799, 900. 00	25, 478, 150. 00	—321, 750. 00
Reserve fund.....	18, 414, 578. 33	6, 142, 131. 99	—12, 272, 446. 34
Undivided profits.....	342, 854. 71	6, 737, 508. 88	+6, 394, 654. 17
Bank notes in circulation.....	30, 857, 698. 70	24, 017, 003. 50	—6, 850, 695. 20
Due to head office, branches, agents, and corre- spondents.....	21, 476, 036. 13	27, 386, 495. 13	+5, 910, 459. 00
Due to other banks.....	4, 451, 103. 58	5, 417, 918. 63	+966, 815. 05
Dividends due and unpaid.....	272, 036. 50	337, 744. 00	+65, 707. 50
Demand deposits.....	66, 772, 496. 35	69, 078, 633. 32	+2, 306, 136. 97
Time deposits.....	26, 548, 317. 34	33, 035, 044. 53	+6, 486, 727. 49
Savings deposits.....	53, 655, 873. 69	62, 554, 310. 25	+8, 898, 436. 56
Bills payable:			
(a) Domestic.....	42, 982. 49	7, 008. 58	—35, 973. 91
(b) Foreign.....	465, 218. 33	392, 993. 95	—72, 224. 38
Cashier's checks outstanding.....	832, 503. 49	119, 892. 59	—712, 610. 90
Certified checks.....	399, 388. 49	572, 233. 17	+172, 844. 68
Profit and loss accounts.....	850, 816. 37	1, 934, 975. 68	+1, 084, 159. 31
Suspense account.....	1, 158, 674. 71	1, 119, 235. 81	—39, 438. 90
Liabilities other than above.....	4, 042, 263. 69	8, 060, 808. 06	+4, 018, 544. 37
Total.....	256, 392, 742. 90	272, 392, 088. 37	+15, 999, 345. 47

MUTUAL BUILDING AND LOAN ASSOCIATIONS

On December 31, 1928, the resources of 8 mutual building and loan associations, aggregated P72,010,853.22 as compared with the resources of the 9 associations amounting to P63,746,440.32 reported on December 31, 1927.

Of the eight associations reporting on December 31, 1928, two small ones, the Balaymi Mutual Building & Loan Association and the Narcisiñan Sailors Mutual Building & Loan Association, are still in the process of voluntary liquidation.

In the year under review the Pangasinan Home Mutual Building & Loan Association with an authorized capital of P1,000,000 and total resources of P36,620.85 on December 31, 1927, was voluntarily dissolved.

Late in 1928 a new association with head office in Legazpi, Albay, was registered, but no report of its business has been rendered to this office.

REGISTRATION AND EXAMINATION OF SPECULATIVE CORPORATIONS

The insular treasurer, by virtue of Act No. 2581, as amended by Act No. 2817, exercises supervision over corporations, partnerships, and associations selling or proposing to sell speculative securities.

Pursuant to the provisions of the aforementioned law, one corporation, the Philippine Education Co. (Inc.), was granted permit during the year 1928 to sell securities as against six corporations which were granted permits during the previous year.

MUTUAL BENEFIT, RELIEF, AND BENEVOLENT SOCIETIES

The combined resources and liabilities, as of December 31, 1927, and receipts and disbursements during 1927, of 240 mutual benefit, relief, and benevolent societies which transacted business during the year 1927 and filed their annual financial reports during the year 1928 are as follows:

Assets.....	P486, 487. 55
Liabilities.....	43, 310. 78
Net worth.....	443, 176. 77
Receipts.....	692, 645. 73
Disbursements.....	672, 148. 28

The combined resources and liabilities, as of the dates of examination, of 15 societies and 16 duly organized branches of societies examined during 1928, are as follows:

Assets.....	₱190, 033. 98
Liabilities:	
Accounts payable.....	51, 230. 62
Benefit claims pending settlement.....	1, 698. 22
Net worth.....	137, 105. 14

INSURANCE

On December 31, 1928, there were 7 fire, 5 marine, 6 life, 22 fire and marine, and 37 miscellaneous insurance companies engaged in business in the Philippine Islands. The business done by said companies in the Philippine Islands as per statements filed with this office is as follows:

Fire insurance

	1927	1928
Net risks written.....	₱331, 314, 072. 00	₱359, 371, 937. 72
Net premiums received.....	3, 937, 880. 00	4, 161, 339. 67
Net losses incurred.....	3, 264, 710. 00	2, 075, 275. 75
Net losses paid.....	2, 656, 125. 00	1, 366, 270. 61
Ratio of losses incurred to premiums received (per cent).....	82. 9	49. 9

Marine insurance

	1927	1928
Net risks written.....	₱398, 879, 092. 00	₱420, 575, 380. 39
Net premiums received.....	1, 622, 891. 00	1, 663, 299. 77
Net losses incurred.....	¹ 1, 625, 327. 00	¹ 432, 010. 73
Net losses paid.....	1, 618, 331. 00	511, 550. 80
Ratio of losses incurred to premiums received (per cent).....	100. 1	25. 9

¹ Excluding losses not yet ascertained.

LIFE INSURANCE ¹

1926

Insurance in force Jan. 1, 1926.....	₱67, 183, 552
Insurance issued, revived, and increased during the year.....	{ Number.. 6, 358
	{ Amount.. ₱17, 696, 769
Insurance terminated.....	₱11, 196, 920
Policies in force Dec. 31, 1926.....	{ Number.. 23, 245
	{ Amount.. ₱73, 683, 401
Claims paid.....	₱1, 527, 766
Losses and claims unpaid Dec. 31, 1926.....	₱490, 290

1927

Insurance in force Jan. 1, 1927.....	₱73, 737, 592
Insurance issued, revived, and increased during the year.....	{ Number.. 7, 961
	{ Amount.. ₱23, 182, 922
Insurance terminated.....	₱14, 378, 328
Policies in force Dec. 31, 1927.....	{ Number.. 25, 619
	{ Amount.. ₱82, 508, 186
Claims paid.....	₱1, 594, 477
Losses and claims unpaid Dec. 31, 1927.....	₱326, 222

¹ The data for 1928 are not available at the writing of this report.

Miscellaneous insurance

	Health, accident, and casualty	Motor vehicles, motor car and automobile	Fidelity and surety
1927			
Net risks written.....	P455,000.00	P3,875,613.00	P17,496,662.00
Net premiums received.....	3,296.00	150,955.00	357,803.00
Net losses incurred.....	60.00	118,551.00	31,742.00
Net losses paid.....	60.00	81,929.00	31,742.00
Ratio of losses incurred to premiums received...per cent..	1.8	78.5	8.8
1928			
Net risks written.....	P607,500.00	P4,914,497.12	P19,560,425.97
Net premiums received.....	4,398.79	173,021.50	389,476.77
Net losses incurred.....	90.00	105,424.75	24,682.91
Net losses paid.....	90.00	105,270.74	24,682.91
Ratio of losses incurred to premiums received...per cent..	2.0	60.9	6.3

	Plate glass	Typhoon, flood, and earthquake	Workmen's compensation and employers' liability	Others
1927				
Net risks written.....		P17,748,123.00		P5,086,150.00
Net premiums received.....	P2,341.00	46,257.00		20,052.00
Net losses incurred.....	124.00			
Net losses paid.....	124.00			
Ratio of losses incurred to premiums received.....per cent..	5.2			
1928				
Net risks written.....		P19,757,555.20	P3,771,932.89	P15,302,617.00
Net premiums received.....	2,658.27	55,950.34	161,887.75	72,905.51
Net losses incurred.....	100.76	42,156.32	19,673.60	300.00
Net losses paid.....	100.76	69,998.82	5,487.70	300.00
Ratio of losses incurred to premiums received.....per cent..	3.8	75.3	12.2	.4

EXAMINATION OF DOMESTIC COMPANIES

The combined resources and liabilities, as of the dates of examination, of the six domestic insurance companies examined by the insurance commissioner during the year, pursuant to the provisions of section 174 of the insurance law, are as follows:

Gross assets.....	P15,512,094.12
Admitted assets.....	14,982,302.00
Liabilities excluding capital and surplus.....	7,739,145.09
Capital.....	4,013,100.00
Surplus.....	3,230,056.91

BUSINESS OF UNAUTHORIZED COMPANIES

Under the provisions of section 192 of the insurance law, five duly authorized insurance agents procured, during 1928, for companies not authorized to transact business in this country, insurance to the total sum of P12,492,116.73 on risks located here, and collected for the companies premiums amounting to P50,898.97.

DEPOSITS REQUIRED BY LAW

The securities deposited by foreign insurance companies doing business in the Philippine Islands in compliance with section 178 of the insurance law consisted, on December 31, 1928, of the following:

Certificates of deposit issued by local banks (pesos).....	1,990,000.00
Bonds, in gold dollars.....	1,265,000.00
Bonds, in Philippine pesos.....	228,000.00
Bonds, in Hong Kong dollars.....	80,000.00
Bonds, in pounds sterling.....	64,670/0/0
Bonds, in yens.....	35,000.00
Other securities, in Philippine pesos.....	259,116.61

BUREAU OF CUSTOMS

CUSTOMS RECEIPTS AND EXPENDITURES

A new record in customs collections unsurpassed in the history of the islands was established for the year 1928, the total amount collected having been ₱23,418,653.94 as compared with ₱20,092,846.78 in 1927, or a net increase of ₱3,325,807.16. The increase is due to larger importations of nearly all articles of imports, such as cotton goods, iron and steel, paper and its manufactures, meat and dairy products, wheat flour, coal, mineral oils, tobacco products, rice, and automobiles, accessories and tires. The decrease in our exports did not affect the upward trend of the customs collections. The customs service for collecting a peso of customs revenue declined for 1928, it having reached the amount of ₱0.045 which is the lowest figure recorded in the bureau of customs with the exception of the early period of the American occupation from 1899 to 1901.

The principal sources of collections for 1928 are specified in the following tables:

	1928	1927	Increase (+) decrease (-)
By ports:			
Manila.....	₱19,577,073.40	₱17,425,538.34	+₱2,151,535.06
Iloilo.....	1,540,835.19	1,460,493.18	+80,342.01
Cebu.....	2,221,788.24	1,164,110.46	+1,057,677.78
Jolo.....	121,310.08	113,310.94	+7,999.14
Zamboanga.....	245,923.50	163,554.39	+82,369.11
Davao.....	224,697.35	175,380.99	+49,316.36
Legaspi.....	119,523.34	128,152.14	-8,628.80
Total.....	24,051,151.10	20,630,540.44	+3,420,610.66
By sources:			
Import duties.....	19,511,230.79	16,251,675.16	+3,259,555.63
Wharfage.....	2,578,846.60	2,476,759.18	+102,087.42
Immigration dues.....	323,856.00	384,128.00	-60,272.00
Tonnage dues.....	395,669.60	384,006.38	+11,663.22
Customs stamps.....	659,201.22	633,957.83	+25,243.39
Miscellaneous taxes (United States collection).....	16,966.52	13,855.30	+3,111.22
Fines and forfeitures.....	68,845.12	65,101.75	+3,743.37
Storage.....	28,309.16	24,680.53	+3,628.63
Surplus, auction sales.....	11,370.53	3,774.30	+7,596.23
Arrastre collections.....	8,021.07	8,427.18	-406.11
Government pier collections.....	147,342.15	152,145.60	-4,803.45
Various other sources.....	301,492.34	232,029.23	+69,463.11
Total.....	24,051,151.10	20,630,540.44	+3,420,610.66
Refunds.....	632,497.16	537,693.66	+94,803.50
Net total.....	23,418,653.94	20,092,846.78	+3,325,807.16

NOTE.—The total expenditures of this bureau in 1928 amounted to ₱1,093,907.98 as against ₱1,096,983.72 in 1927, or a decrease of ₱3,075.74.

INTERNAL-REVENUE COLLECTIONS

Internal-revenue taxes on imported merchandise subject to said tax collected by this bureau during the year reached the sum of ₱4,228,324.56, as compared with ₱3,701,933.46 in 1927, showing an increase of ₱526,391.10. This is due to increased importations of articles subject to the payment of internal-revenue specific tax.

HIGHWAYS SPECIAL FUND COLLECTIONS

Taxes for the highways special fund created by Act No. 3248 for the maintenance, improvement, and construction of provincial and insular roads and bridges were also collected, the total amount of which having been ₱3,630,533.48, as against ₱2,926,098.38 in 1927, or an increase of ₱704,435.10.

FOREIGN COMMERCE

The total foreign trade of Philippine Islands for the year 1928 reached the amount of ₱579,422,888, as against ₱542,851,113 in 1927, or an increase of

₱36,571,775. The imports for the year amounted to ₱269,313,796, as compared with ₱231,702,943 in 1927, registering an increase of ₱37,610,853; while the exports totaled ₱310,109,092, as against ₱311,148,170, or a shrinkage of a little over ₱1,000,000. The year under review closed with the balance of trade in favor of the islands amounting to ₱40,795,296.

TRADE WITH THE UNITED STATES

About 68.85 per cent of the trade of the Philippine Islands during 1928 was carried on by this country with the United States, amounting to ₱398,887,886, or ₱31.64 per capita, as compared with ₱375,033,094 in 1927, or ₱30.36 per capita. The importation from the United States amounted to ₱167,716,135, representing 62.26 per cent of the total importation of the islands, as compared with ₱142,956,594 in 1927; while the exports totaled ₱231,171,751, representing 74.55 per cent of the total exports of the Philippine Islands, as against ₱232,076,500 in 1927. The balance of trade with the United States is in favor of the islands.

TRADE WITH COUNTRIES OTHER THAN THE UNITED STATES

Next to the United States the largest volume of our trade was carried on with Japan, representing 6.87 per cent of the total trade, followed by these countries: Great Britain, 4.68 per cent; China, 3.47 per cent; Germany, 2.69 per cent. The origin of our imports and the destination of our exports are shown in the following table:

Countries of origin of imports and destination of exports	1928		1927	
	Imports	Exports	Imports	Exports
United States.....	₱167,716,135	₱231,171,751	₱142,956,594	₱232,076,500
Hawaii.....	819,145	704,630	1,413,617	567,282
Porto Rico.....		1,993		
Guam.....	181,720	536,914	22,949	349,466
Japan.....	25,861,753	13,944,735	22,185,451	15,447,704
Great Britain.....	11,297,361	15,792,135	10,367,353	17,126,486
China.....	13,119,487	7,008,296	12,918,753	5,235,846
Germany.....	9,249,902	6,307,305	7,117,396	6,297,654
Spain.....	1,855,106	10,183,918	1,751,618	11,383,483
France.....	3,129,576	5,406,855	3,287,793	3,171,271
British East Indies.....	6,004,675	2,357,519	4,725,601	2,797,899
Dutch East Indies.....	6,070,269	669,066	5,576,322	491,843
Australia.....	4,867,561	1,253,280	4,509,193	1,803,549
Belgium.....	2,916,033	2,796,782	2,284,233	1,818,734
French East Indies.....	4,802,695	101,486	2,441,311	96,203
Netherlands.....	1,068,424	2,931,899	1,184,315	3,310,531
Italy.....	766,514	3,057,364	894,962	3,704,291
Hong Kong.....	696,452	2,697,073	559,096	2,750,979
Switzerland.....	3,315,550	28,593	2,451,907	106,844
Japanese China.....	1,325,859	63,876	1,802,936	103,006
Canada.....	797,845	438,351	460,872	328,883
Sweden.....	624,100	482,296	494,162	146,190
Norway.....	312,050	580,284	282,658	169,908
Ireland.....	496,941	40	404,239	
Siam.....	150,298	260,319	273,526	284,070
Denmark.....	166,894	255,040	112,465	221,540
Austria.....	220,898		152,088	2
Other countries.....	1,450,553	1,077,262	1,071,533	1,358,006
Total.....	269,313,796	310,109,092	241,702,943	311,148,170

PRINCIPAL ARTICLES IMPORTED

In the order of their importance as to value, the 10 principal articles imported by the islands during the year are as follows:

1. *Cotton and its manufactures.*—Twenty per cent of the total importations of the islands during the year consists of cotton and its manufactures, the value of which amounted to ₱56,272,304 as against ₱46,085,427, showing an increase of 22 per cent over similar importations in 1927. The principal source of the islands' supply of cotton goods is the United States, 54 per cent of the total

having been imported from that country. Japan and the United Kingdom come next, with Switzerland and China ranking fourth and fifth, respectively.

2. *Iron and steel and their manufactures.*—Fifteen per cent of the total importations of the islands consists of iron and steel and their manufactures amounting to ₱40,296,562 in 1928 as compared with ₱30,855,639 in 1927, showing an increase of 31 per cent compared with similar importations in 1927. The largest portion of these imports, or 78 per cent, come from the United States.

3. *Mineral oils.*—Mineral oils imported constitute 7 per cent of our total importations during the year, showing an increase of 14 per cent over imports of the same kind in 1927. These products represent the value of ₱17,608,298 in 1928 as against ₱15,405,879 in 1927.

4. *Meat and dairy products.*—Five per cent of our total imports during the year consists of meat and dairy products, registering an increase of 7 per cent over similar imports in 1927. These products reached the value of ₱13,346,159 during the year as compared with ₱12,418,212 in 1927.

5. *Automobiles, parts of, and tires for.*—The importations of automobiles are increasing in great proportion from year to year. The total value for 1928 is ₱13,292,723 as against ₱12,479,552 in 1927. They constitute 5 per cent of our total importations, showing an increase of 7 per cent compared with the previous year.

6. *Wheat flour.*—Imports of wheat flour constitute 4 per cent of our total importations during the year, the value of which amounted to ₱10,650,603 in 1928 as against ₱9,731,783 in 1927, showing a slight increase as compared with the previous year.

7. *Silk and its manufactures.*—These articles constitute 3 per cent of our total importations and show an increase of 7 per cent compared with the preceding year. During the year they amounted to ₱8,512,739 as compared with ₱7,960,729 in 1927.

8. *Paper and its manufactures.*—Imports of these articles constitute 3 per cent of our total importations, and show an increase of 8 per cent compared with the previous year. These articles represent the value of ₱8,257,529 in 1928 as against ₱7,654,852 in 1927.

9. *Tobacco products.*—The importations of tobacco products registered during the year an increase of 13 per cent. These products constitute only 2 per cent of the total imports, representing the value of ₱6,202,070 in 1928 as against ₱5,491,741 in 1927.

10. *Coal.*—Of the 10 largest importations of the islands during the year, coal registered an increase compared with the preceding year, the increase being 12 per cent. The importation of coal in 1928 reached the value of ₱5,183,153 as compared with ₱4,606,927 in 1927.

Other imports.—Articles other than the ten principal ones above mentioned have a total value of ₱89,691,656, showing an increase of 14 per cent compared with the value of similar goods imported in 1927.

PRINCIPAL ARTICLES EXPORTED

In the order of their importance as to value, the 10 principal local products exported during the year are as follows:

1. *Sugar.*—The value of sugar exported during the year reached ₱95,085,879 as compared with ₱100,591,919 in 1927 or a decrease of 5 per cent. It is the largest item of our exportations, constituting 31 per cent thereof.

2. *Abacá (Manila hemp).*—The second largest item of our exports is abacá, the value of the shipment sent abroad during the year being ₱53,187,212 as compared with ₱59,374,258 in 1927, or a decrease of 10 per cent, and represents 11 per cent of our total exports. Thirty-five per cent of our abacá exports went to the United States, 23 per cent to the United Kingdom, and 20 per cent to Japan.

3. *Coconut oil.*—The value of coconut oil exported during the year reached ₱46,978,345 as against ₱49,681,356 in 1927, or a decrease of 5 per cent. Almost all of our coconut oil exports went to the United States, 98 per cent thereof having been sent to the markets of that country.

4. *Copra.*—Copra exports during the year registered an increase of 18 per cent, from ₱38,311,481 in 1927 to ₱45,084,682 in 1928. The largest portion of copra exports went to the United States, while the balance was distributed among other countries.

5. *Tobacco products*.—A decrease of 4 per cent has been registered in the exportations of these domestic products. The value exported during the year is ₱17,142,873, whereas during the preceding year it amounted to ₱17,817,331.

6. *Embroideries*.—Exports of embroideries during the year show an increase, from ₱8,006,952 in 1927 to ₱9,047,936 in 1928, the increase being 13 per cent. Almost all of the locally manufactured embroideries were exported to the United States, the portion sent to other countries being negligible.

7. *Desiccated coconut*.—The value of these local products exported during the year is ₱7,447,171, showing an increase of 31 per cent compared with ₱5,700,120 worth of similar exports in 1927. Most of our exportations of desiccated coconut went to the United States.

8. *Hats*.—There has been a great deal of activity in hat exportations during the year. The value of the shipment to foreign markets being ₱6,717,925 as compared with ₱3,135,772 in 1927, or an increase of 114 per cent. The largest portion of exportations of hats went to the United States, the rest to other countries.

9. *Lumber*.—The value of lumber, including logs, exported during the year is ₱6,253,001, an increase of 12 per cent over that exported in 1927, which amounted to ₱5,587,614. Fifty-two per cent of our lumber sent abroad went to the United States.

10. *Copra meal*.—The value of copra meal exported to foreign markets during the year reached the amount of ₱5,772,274 as compared with ₱4,969,078 in 1927, or an increase of 16 per cent.

Other exports.—The value of all products other than the 10 principal ones hereinbefore mentioned totaled ₱17,647,257, a decrease of 2 per cent compared with all exports in 1927 exclusive of 10 principal ones for that year.

FOREIGN CARRYING TRADE

In 1928 the American vessels retained the leadership, having carried merchandise for the islands to the value of ₱263,513,136 as against ₱267,912,253 in 1927, or a decrease of ₱4,399,117. Ships under the British flag followed those of the United States, registering an increase from a value of ₱167,475,647 in 1927 to ₱186,279,790 during the year under review. The Japanese vessels come next, but like the American ships a decrease was recorded, for they carried ₱40,249,821 in 1928 as against ₱45,106,818 in the previous year. The ships under the German flag again won fourth place, registering another considerable increase by jumping from ₱23,319,726 in 1927 to ₱28,713,314 in 1928. The following is a comparative statement of the values of trade carried by, and the number and tonnage of, vessels of different nationalities calling at Philippine ports:

Nationality of vessels	1928		1927	
	Amount	Per cent	Amount	Per cent
American.....	₱263,513,136	45.50	₱267,912,253	49.40
British.....	186,279,790	32.16	167,475,647	30.80
Japanese.....	40,249,821	6.96	45,106,818	8.30
German.....	28,713,314	4.90	23,309,886	4.30
Norwegian.....	13,949,417	2.41	1,311,468	.20
Dutch.....	13,600,855	2.35	12,241,341	2.30
Swedish.....	4,175,358	.73	4,763,962	.90
Philippine.....	3,597,946	.62	2,983,262	.50
Spanish.....	3,242,269	.56	3,019,891	.60
Danish.....	2,148,923	.37	47,076	-----
All other.....	1,440,634	.25	690,129	.10
Total by freight.....	560,911,463	96.81	528,814,657	97.40
Total by mail.....	18,511,425	3.19	14,036,456	2.60
Total trade.....	579,422,888	100.00	542,851,113	100.00

1928

Nationality of vessels	Vessels entered		Vessels cleared	
	Number	Net tonnage	Number	Net tonnage
American.....	232	1,212,791	218	1,171,818
Philippine.....	50	128,954	57	135,856
British.....	412	1,493,001	412	1,491,847
Chinese.....	11	16,311	11	16,311
Danish.....	3	6,877	3	6,877
Dutch.....	76	261,900	75	263,908
French.....	3	3,396	2	2,264
German.....	144	589,026	138	570,825
Spanish.....	3	7,185	3	7,185
Japanese.....	137	438,218	138	443,600
Norwegian.....	66	143,579	68	147,947
Swedish.....	7	21,765	7	21,765
Czechoslovakian.....	2	2,240	2	2,240
Total.....	1,146	4,325,243	1,134	4,282,443

1927

Philippine.....	59	139,672	68	160,494
American.....	270	1,392,139	258	1,349,037
British.....	374	1,368,169	378	1,369,918
Belgian.....	1	1,065	1	1,065
Chinese.....	19	27,371	18	27,317
Danish.....	2	1,617	1	1,343
Dutch.....	68	210,756	67	209,641
German.....	106	451,431	105	448,441
Japanese.....	157	509,296	157	515,010
Norwegian.....	34	35,637	34	35,637
Spanish.....	3	7,185	3	7,185
Swedish.....	2	5,814	3	8,523
Total.....	1,095	4,150,152	1,093	4,133,611

Permits to foreign vessels to call at places which are not ports of entry were granted during the year. The most important products taken from these ports are sugar, copra, and lumber. In Manila collection district, Philippine products were taken from Boac (Marinduque), Casiguran (Tayabas) Catanauan (Tayabas), Guinayangan (Tayabas), Hondagua (Tayabas), Polillo (Tayabas), Port Real (Tayabas), and Siain (Tayabas) to the value of ₱1,901,773.82; from Legaspi collection district, local products were taken from Aroroy (Masbate), Bulan (Sorsogon), Gubat (Sorsogon), Lagonoy (Camarines Sur), Masbate (Masbate), S paco (Camarines Sur), Siruma (Camarines Sur), and Tabaco (Albay), the total value of which amounted to ₱3,079,253.45; from Iloilo collection district, products were taken from Cadiz (Occidental Negros), Pulupandan (Occidental Negros), Mangarin (Mindoro), Romblon (Romblon), Sagay (Occidental Negros), San Carlos (Occidental Negros), and Sumagui (Mindoro), the aggregate value of which amounted to ₱7,251,258.86; from Cebu collection district, products were taken from Cagayan (Misamis), Camiguin Island (Misamis), Gingoog (Misamis) Kulabugan (Lanao), and Tacloban (Leyte), the total value of which amounted to ₱1,834,579.08; from Zamboanga collection district, local products were taken from Margosatubig (Zamboanga), Panabutan (Zamboanga), Port Banga (Zamboanga), and Port Holland (Basilan), the total value of which amounted to ₱382,017.36; and from Jolo, collection district, miscellaneous articles were taken at Sitanki, the value of which amounted to ₱8,447.30.

DOCUMENTATION AND LICENSING OF VESSELS FOR THE PORT OF MANILA

A total of 213 vessels with an aggregate net tonnage of 8,070.67 were newly documented in 1928 both for the coastwise trade and the bay and river traffic, as compared with 210 vessels in the year 1927 with an aggregate net tonnage of 11,099.01.

Licenses were issued at the port of Manila to 2,255 vessels with a total net tonnage of 91,954.39. Of these vessels, 162 were coastwise steam and motor

vessels having an aggregate net tonnage of 30,028.07; 580 are coastwise vessels not propelled by either steam or other mechanical motive power having an aggregate net tonnage of 21,820.30; 1,513 are miscellaneous vessels for the bay and river traffic with an aggregate net tonnage of 40,106.02.

COASTWISE ENTRANCE AND CLEARANCE

During the year the number of vessels engaged in the domestic shipping trade in all ports of entry decreased as compared with the previous year, but the tonnage thereof increased to a considerable extent. There were in all 20,763 coastwise vessels with a total net tonnage of 2,891,270 which entered the various ports of entry in 1928, as against 21,125 coastwise vessels with an aggregate net tonnage of 2,802,042 for 1927. During the same period 20,986 coastwise vessels were cleared from the different ports of entry, with an aggregate net tonnage of 2,849,431, as compared with 21,317 coastwise vessels, with a total net tonnage of 2,739,532, cleared in 1927. It is gratifying to note, however, that in the port of Manila the number and tonnage increased with respect to coastwise vessels which entered and cleared therefrom.

The following table shows a comparative statement of the entrance and clearance of vessels engaged in the coastwise trade at the ports of entry of the Philippine Islands:

ENTERED

Ports of entry	1928		1927	
	Number	Net tonnage	Number	Net tonnage
Manila.....	3,370	861,687	3,261	848,726
Iloilo.....	8,032	786,366	8,263	773,095
Cebu.....	7,344	783,688	7,469	715,157
Jolo.....	224	44,626	240	34,890
Zamboanga.....	1,196	258,864	1,332	232,814
Davao.....	79	48,998	93	43,998
Legaspi.....	518	107,041	467	153,362
Total.....	20,763	2,891,270	21,125	2,802,042

CLEARED

Manila.....	3,434	863,630	3,291	836,013
Iloilo.....	7,899	783,707	8,289	777,684
Cebu.....	7,617	741,684	7,601	662,805
Jolo.....	229	45,507	240	34,219
Zamboanga.....	1,210	258,592	1,338	233,230
Davao.....	78	48,516	92	43,971
Legaspi.....	519	107,795	466	151,610
Total.....	20,986	2,849,431	21,317	2,739,532

INSPECTION OF VESSELS

Two hundred and sixty vessels of all kinds with an aggregate gross tonnage of 80,948.40 were inspected at the port of Manila during the year, as compared with 278 vessels with a total gross tonnage of 102,215.49 in 1927. During the same period 151 vessels with a total gross tonnage of 13,953.32 were ad-measured in said port. One thousand nine hundred and forty-eight special permits temporarily authorizing vessels to operate in the coastwise trade, bay, and river traffic, and on any waters of any ocean, were issued during 1928, pending the issuance of the required certificates of inspection.

MARINE OFFICERS

During the year 1928, 91 applicants, all Filipinos, applied for admission to marine officers' and marine engineers' examinations, of whom 84 actually took the examination and 7 withdrew therefrom. Of those examined, 54 were successful and 30 failed to obtain the required ratings to pass. During the same period 141 certificates were issued, of which 118 were for any ocean and 23 for coastwise.

MARINE ACCIDENTS

There were registered during the year 1928, 58 marine accidents met by vessels of Philippine registry in Philippine waters: 8 were due to collisions, 13 to groundings, 10 to sinkings, 3 were lost, and 19 were of little or no importance. Of the 58 marine accidents so registered, 25 were due to the last November typhoon which hit the islands of Samar, Cebu, and Leyte, and part of the Bicol Provinces. Among these accidents of notable importance were the groundings of the steamship *Euzcadi* and motor ships *Picket I* and *Medalla Milagrosa*, owing to the number of persons who perished. The steamship *Euzcadi* grounded in San Juan Island, Balicuatro, on November 23, 1928, and as a consequence of which, 12 persons lost their lives, including the chief engineer. The motor ship *Picket I* ran aground in Baybay, Leyte, on November 22, 1928, which resulted in the drowning of 12 persons and 28 missing. The motor ship *Medalla Milagrosa* also ran aground off the coast of Camotes Island on November 23, 1928. As a result of this accident, 12 persons were also drowned, including the patron and engineer. These three cases are still pending at the present time.

Of the 8 cases of collisions, 3 were amicably settled; 3 were due to force majeure; 1 was due to the fault of one of the colliding vessels; and 1 was pending at the close of the year. Of the 18 cases of groundings, 5 were due to force majeure and 13 are still pending to the present writing, 10 of which were reported by the Cebu customhouse to have occurred during the last November typhoon. Of the 10 cases of sinking, 4 were attributed to force majeure, and 6, which were also reported by Cebu, are still pending. The 3 vessels reported lost as a consequence of the same typhoon last November, 1 of which came from Cebu, are still being searched for.

CONSULAR SERVICE

During the year 1928 there were 391 seamen discharged at the port of Manila from vessels of the United States registry, consisting of 171 Americans, 191 Filipinos, 5 Europeans, 21 Chinese, 1 Hawaiian, and 2 Porto Ricans, as against 434 of the preceding year, composed of 128 Americans, 291 Filipinos, 10 Europeans, and 5 Chinese. Out of the 171 American seamen so discharged, 21 were given consular relief, as against 36 of the preceding year, 17 of whom obtained employment on American vessels, and 4 were sent to the United States as consular passengers. Thirty-seven seamen, consisting of 35 Americans, 1 European, and 1 Porto Rican, were left in the marine hospital during the year on account of illness contracted in line of duty, to be cured and repatriated at the expense of their respective ships, as against 32, consisting of 30 Americans and 2 Chinese, of the preceding year.

Throughout the year, 288 seamen, composed of 122 Americans, 160 Filipinos, 2 Chinese, and 4 Javanese, were signed on American vessels before this office as regular members of the crew; 23 seamen of various nationalities were reported by masters of American vessels to have signed on at sea; and 62 Americans were signed on before this office as workaways.

During the year there were 94 American seamen who were not regularly discharged before this office, but who for one reason or another, were left behind, or voluntarily left their ships, as against 63 of the preceding year. Thirty-two seamen, consisting of 15 Americans and 17 Chinese, were transferred from one American vessel to another of the same registry, as against 116, composed of 2 Americans, 113 Chinese, and 1 of unknown nationality, of the previous year.

There were 153 consular invoices and 461 invoices of returned American goods issued by this office during the year, as compared with 112 consular invoices and 409 invoices of returned American goods in 1927.

IMMIGRATION AND EMIGRATION

The passenger movement for 1928 is about the same as that of the preceding year, registering only a slight decline in the number of those who departed from the islands as against the increase in the number of arrivals. There were in all 35,991 persons who arrived in, and 41,725 who departed from, the Philippine Islands, excluding those attached to the military and naval forces of the United States traveling as such. There were 34,768 passengers who arrived in, and 42,821 who departed from, the country in 1927.

Of those arriving in the islands, 4,756 were citizens of the United States, 9,723 Filipinos, and 85 Hawaiians and other American nationals. Of the Americans, 2,565 came from the United States and insular possessions and 2,191 from foreign countries. As to the Filipinos who returned from abroad, 6,436 came from the United States and insular possessions and 3,287 from other countries. Of the aliens who arrived, 16,349 were Chinese, 2,750 Japanese, 652 English, 490 Spanish, 192 Germans, 198 East Indians, 125 Russians, 111 Dutch and Flemish, 120 French, 48 Portuguese, 42 Scandinavians, 46 Scotch, 19 Syrians, 28 Italians, 22 Turkish, 8 Irish, and other nationalities 227. As to the Chinese who arrived during the year, 23 came from the United States and insular possessions, 8,249 were immigrants from China and other foreign countries, and 8,077 were nonimmigrants. Of the Japanese arrivals, 2,366 were immigrants and 383 nonimmigrants.

Of those who left the country, 3,442 were Americans, 21,310 Filipinos, and 1 other American national. The number of aliens who departed from the islands is distributed as follows: 13,867 Chinese, 56 Dutch and Flemish, 135 East Indians, 588 English, 101 French, 170 Germans, 10 Irish, 20 Italians, 1,196 Japanese, 38 Portuguese, 122 Russians, 25 Scandinavians, 16 Scotch, 427 Spanish, 4 Syrians, 14 Turkish, and 183 other aliens.

Of the Filipinos departed, 18,076 went to the United States and insular possessions and 2,234 to other countries.

As to the Chinese aliens who left the islands, 3,233 were emigrants, 10,629 nonemigrants, and 5 departed for the United States. Of the Japanese, 679 were emigrants, 514 nonemigrants, and 3 went to the United States.

A total of 236 were debarred from admission into the country during the year, of whom 222 were Chinese, 5 East Indians, and 9 Japanese. Twenty-nine Chinese were deported by order of competent authority, 16 of whom were for violation of Act No. 2381 (opium law), 7 for violation of Act No. 702, and 6 for various offenses.

PROTESTS AND APPEALS

During the year 1928 there were lodged with the board of protests and appeals in Manila 137 protests against the classification and appraisal of imported merchandise, collection of customs duties, internal-revenue taxes, wharfage taxes, storage charges, etc., under the provisions of section 1370 of the Administrative Code. Twenty-six protests were overruled and denied, 35 sustained, 5 dismissed, and 71 were pending decision at the close of the year, which, together with 118 of the previous years, make a total of 189 protests undecided. Of those overruled and denied, 12 were taken to the court of first instance on appeal.

Similar protests were filed with the collectors of customs at other ports of entry, 12 of which were acted upon and sent to this office either on appeal or for review, 10 thereof being against the assessment of customs duties, and 2 against the collection of fines. Of the decisions of said collectors, 7 were affirmed, 4 reversed, and 1 was pending at the close of the year.

GOVERNMENT PIERS

During the year 1928 there were in all 764 vessels which were berthed at the piers of the insular government at the port of Manila, 668 of which were in the foreign trade, 69 coastwise, 11 Philippine government vessels, and 16 belonging to the Army and Navy of the United States and foreign countries. Comparing these figures with those of 1927, there is an increase of 65 in the total number of vessels berthed and 60 on the vessels engaged in the foreign trade. The increase may be safely attributed to the upward trend of the foreign trade of the islands as well as to the completion for business of Pier No. 7, which is equipped with the most modern and up-to-date handling devices, and the improvements made on Piers Nos. 3 and 5. With the existing piers on hand, the demand for better port facilities and accommodations has been amply satisfied.

Following the increase in the number of vessels that took berth at government piers in 1928, a considerable increase in the quantity of cargo handled was also registered. A total of 739,000 tons of cargo was discharged by the 668 foreign vessels that came alongside said piers, as compared with 680,000 tons for 1927. Of the cargo handled about 650,000 tons were discharged onto piers and the rest onto lighters at shipside.

SECRET SERVICE

During the year under review the work of the secret service force has been ably directed as in previous years. Despite the many handicaps narrated in the previous report, it is gratifying to note that the prosecution of violators of the customs, opium, and immigration laws has been characterized by unusual efficiency throughout the year. The closest surveillance exercised by the secret service men in all ports of entry made it extremely difficult, if not impossible, to treat with contempt the laws administered by this bureau. One hundred and fifty-nine cases were filed against violators of said laws at the port of Manila, of which 152 convictions were obtained, 1 dismissal, and 6 pending at the end of the year. The penalty imposed in all such convictions represents eight months and one day imprisonment and fine in the aggregate sum of ₱1,100.50.

CONTROL OF OPIUM TRAFFIC

The suppression of the illegal traffic in opium and its derivatives has been undertaken during the year as vigorously as possible within the limits permissible by the means at the disposal of this bureau. As in previous years, no effort has been spared to thwart all attempts of opium smugglers to introduce the drug in whatever form into the Philippine Islands illegally.

No quantity of opium or its derivatives originating from the Straits Settlements was seized during the year. The reports of opium seized show that almost all the opium captured came from China. There is no indication that opium has ever been smuggled from India. The inclusion of India by the Council of the League of Nations as one of the countries of origin of opium claimed to be entering the Philippine Islands unlawfully is likely due to its proximity to this country.

The following seizures of opium in the various ports of entry were made during the year under review.

	Kilograms		Kilograms
Manila :		Iloilo : Opium prepared-----	36.725
Opium crude-----	1.462	Davao : None.	
Opium prepared-----	28.125	Legaspi : None.	
Opium ashes-----	.267	Zamboanga : Opium prepared--	.552
Opium pills-----	.0022	Jolo :	
Cebu :		Opium-----	.069
Opium prepared-----	6.758	Opium ashes-----	.0085
Opium ashes-----	.365		
Morphine-----	.010	Total-----	73.847

For these seizures, 20 cases were prosecuted before the courts, resulting in 13 convictions and 7 dismissals. In all such convictions a penalty totaling five years and two months imprisonment and fine of ₱4,800 was imposed.

Opium and opium derivatives are permitted by law to be imported into the Philippine Islands for medicinal purposes through permits issued by the bureau of internal revenue. During the year there were imported into the Philippine Islands "opium, preparations thereof, for medicinal purposes," as follows:

Country	Quantity	Value
	<i>Kilos</i>	
United States-----	33	₱775
France-----	7	97
Germany-----	165	7,761
Switzerland-----	8	359
Total-----	213	8,992

All baggage of passengers arriving at ports of entry of the Philippine Islands from opium-producing countries are carefully examined and inspected with the end in view of detecting and seizing all opium illegally brought into the islands. At the port of Manila such baggage is invariably segregated from that belonging to passengers coming from opium-nonproducing countries to be transported to the customhouse for searching inspection. In previous years the business of transporting such baggage had been done by a private contractor who is declared the winner in a competitive bid held every year pur-

suant to section 1264 of the Administrative Code. In view of the extreme difficulty encountered in determining the successful bidder, all the bids submitted for 1928 had to be annulled, and in lieu thereof this office undertook the task of transporting such baggage. The experiment did not only give better results in so far as thorough inspection of baggage is concerned, but it turned out to be a source of revenue for the government. From October 1, 1928, to the end of the year, there was collected the sum of ₱2,242.30 for service rendered in the transportation of baggage, and the total expenditures amounted to ₱1,037.12, resulting in a net gain of ₱1,205.18.

PERSONNEL

On December 31, 1928, there were 919 employees in this bureau, of whom 552 were in the classified service and 367 in the unclassified. Among the latter group there were 2 Americans, 2 Chinese, and 9 Mohammedan Filipinos. Only 1 American remains in the classified customs service.

PORTS OF ENTRY OTHER THAN MANILA

The customs collections for the ports of Cebu, Iloilo, Jolo, Zamboanga, Davao, and Legaspi are given at the beginning of this abstract. The foreign commerce of these ports are as follows:

Port of Cebu.—The total foreign trade of Cebu during the year under review amounted to ₱77,900,127 as against ₱69,773,154 in 1927. The value of the imports was ₱14,469,938 as compared with ₱11,944,824 during the previous year, while that of the exports totaled ₱63,430,189 as against ₱57,828,330 in 1927. A trade balance of ₱48,960,251 was thus registered in favor of the port. The increase in imports was largely due to greater importations of rice from Saigon, while the increment in exports was the result of bigger shipments of copra and lumber abroad. Rice, wheat flour, cotton goods, kerosene, and iron and steel constitute the principal articles imported into this port valued at ₱2,748,298, ₱1,569,541, ₱1,747,333, ₱1,042,716, and ₱1,534,931, respectively; while copra, abacá, coconut oil, centrifugal sugar, maguex, and copra meal constitute the chief exports, valued at ₱28,168,830, ₱15,612,005, ₱9,687,444, ₱4,251,033, ₱2,785,443, and ₱1,090,824, respectively.

Port of Iloilo.—The total foreign trade of the port of Iloilo during 1928 reached the sum of ₱82,567,707, of which ₱12,198,739 represent the value of imports and ₱70,368,968 that of exports, as compared with ₱88,950,800 in 1927, of which ₱11,590,017 represent the value of imports and ₱77,360,783 that of exports. The reduction in the export column is due to the decrease in sugar exportation brought about by the lowering of sugar prices which started during the last quarter. Fortunately, the decrease was partly offset by the increases in the exportation of sapan wood, copra, and lumber. However, a favorable balance of trade amounting to ₱58,170,229 was registered. Cotton goods, fertilizers, jute bags and bagging, and manufactures of iron and steel constitute the principal articles imported into this port, valued at ₱1,042,757, ₱2,086,533, ₱1,074,580, and ₱2,675,357, respectively; while centrifugal sugar, muscovado sugar, copra, and lumber constitute the chief exports, valued at ₱63,729,339, ₱1,586,032, ₱2,469,036, and ₱2,544,477, respectively.

Port of Zamboanga.—The value of the foreign trade of the port of Zamboanga during the year totaled ₱6,688,428, of which ₱1,609,848 represent the value of imports and ₱5,078,580 that of exports, as compared with ₱5,214,242 in 1927, of which ₱1,828,583 represent the value of imports and ₱3,385,659 that of exports. The most salient feature in the foreign trade of this port is the big increase in the exportation of the major products, such as copra, desiccated coconut, and hemp. It is an evidence of the recovery of the port's export trade, which suffered a big slump in 1926 and 1927. The decline on the imports was due to reduced importation of American goods as already explained. Wheat flour, cotton goods, manufactures of iron and steel, and gasoline constitute the principal articles imported into this port, valued at ₱139,073, ₱577,128, ₱179,578, and ₱153,971, respectively; while copra, lumber, desiccated coconut, and abacá constitute the chief exports, valued at ₱2,577,066, ₱606,562, ₱621,545, and ₱566,718, respectively.

Port of Davao.—The total foreign trade of the port of Davao during the year reached the amount of ₱13,762,805, of which ₱927,255 represent the value of imports and ₱12,835,550 that of exports, as compared with ₱11,184,541 in 1927, of which ₱428,674 represent the value of imports and ₱10,755,867 that of ex-

ports. The import trade is double that of the previous year, due largely to the importation of petroleum products. Likewise, in the export trade unusual activity prevailed during the year under review, resulting in a healthy increase of ₱2,000,000 over the value of exports for the preceding year. Gasoline, kerosene, and manufactures of iron and steel constitute the principal articles imported into this port, valued at ₱153,846, ₱147,169, and ₱100,910, respectively; while abacá, copra, and lumber constitute the chief exports, valued at ₱11,683,750, ₱1,063,675, and ₱80,210, respectively.

Port of Legaspi.—The total value of the foreign trade of the port of Legaspi during the year under review amounted to ₱7,779,823, of which ₱705,148 represent the value of imports and ₱7,074,675 that of exports, as against ₱10,474,332 in 1927, of which ₱1,688,925 represent the value of imports and ₱8,785,407 that of exports. The shrinkage in the foreign commerce of this port was possibly due to the panic caused by the eruption of the Mayon Volcano during the months of June, July, and August during the year and the destructive typhoon which hit the Bicol region last November. The balance of trade in favor of the port has been, however, maintained. Gasoline, rice, kerosene, and coal constitute the principal articles imported into this port, valued at ₱382,457, ₱100,388, ₱90,168, and ₱51,276, respectively; while copra, lumber, and raw rubber constitute the chief exports, valued at ₱6,371,989, ₱700,286, and ₱1,080, respectively.

Port of Jolo.—The total value of the foreign trade of the port of Jolo during the year under review reached the sum of ₱1,302,334, as against ₱963,528 in 1927. The value of the imports was ₱396,203, as compared with ₱376,470 in 1927, while that of exports was ₱906,131, as against ₱587,058 in 1927. Improvement in the foreign commerce of this port was thus recorded as shown by the increase in both exports and imports. Cotton goods, rice, tobacco products, and chemical drugs and medicines constitute the principal articles imported into this port, valued at ₱166,690, ₱24,943, ₱24,856, and ₱22,418, respectively; while copra, shells, and fish and fish products constitute the chief exports, valued at ₱642,101, ₱124,866, and ₱105,542, respectively.

BUREAU OF INTERNAL REVENUE

COLLECTIONS

The collections made by the bureau of internal revenue during the years 1927 and 1928 were from the following sources :

Item	1927	1928
Excise taxes:		
Domestic—		
Distilled spirits.....	₱4,699,677.86	₱4,978,983.17
Fermented liquors.....	363,880.00	379,040.00
Manufactured tobacco.....	418,568.29	439,479.51
Cigars.....	323,930.60	321,262.96
Cigarettes.....	5,916,037.38	5,858,833.55
Matches.....	42,844.00	94,446.00
Wines and imitations.....	266,881.81	273,132.85
Playing cards.....	4,457.50	1,436.00
Cinematographic films.....	887.29	1,262.39
Total.....	12,037,164.73	12,347,876.43
Coal and coke.....	34,902.25	13,200.01
Total excise taxes, domestic.....	12,072,066.98	12,361,076.44
Imported—		
Distilled spirits.....	334,543.11	367,724.20
Fermented liquors.....	39,593.89	54,298.82
Manufactured tobacco.....	229,414.65	232,460.99
Cigars.....	6.45	12.45
Cigarettes.....	753,938.20	932,666.45
Matches.....	478,695.93	546,861.25
Wines and imitations.....	135,239.30	152,641.51
Skimmed milk.....	891.60	439.80
Playing cards.....	345,966.30	421,838.27
Cinematographic films.....	54,938.00	59,825.94
Total.....	2,373,227.43	2,768,769.68

Item	1927	1928
Excise taxes—Continued.		
Imported—Continued.		
Naphtha, gasoline and all lighter products of distillation	P1, 120, 311. 47	P1, 210, 584. 87
Kerosene or petroleum	2, 656, 166. 88	3, 242, 994. 21
Lubricating oils	267, 440. 22	386, 308. 86
Total	4, 043, 918. 57	4, 839, 887. 94
Medicinal preparations containing prohibited drugs	117. 52	71. 03
Coal and coke	210, 768. 32	250, 129. 39
Total excise taxes, imported	6, 628, 031. 84	7, 858, 858. 04
Total excise taxes, domestic and imported	18, 700, 098. 82	20, 219, 934. 48
License, business, and occupation taxes:		
Brewers	2, 620. 00	1, 900. 00
Distillers	20, 326. 06	18, 974. 28
Rectifiers	11, 645. 00	15, 595. 00
Retail liquor dealers	41, 462. 50	40, 471. 62
Retail vino dealers	253, 170. 92	246, 702. 15
Wholesale liquor dealers	118, 466. 00	119, 558. 10
Retail dealers in fermented liquors	42, 220. 22	43, 596. 50
Retail dealers in tuba, basi, tapuy, etc.	299, 302. 66	303, 684. 89
Wholesale dealers in fermented liquors	23, 482. 50	24, 010. 20
Dealers in manufactured tobacco	380, 668. 51	389, 417. 71
Manufactures of chewing and smoking tobacco	1, 346. 49	1, 087. 50
Manufacturers of cigars and cigarettes	2, 788. 00	2, 354. 50
Wholesale peddlers of manufactured tobacco products	15, 550. 00	17, 317. 00
Wholesale peddlers of alcoholic products	8, 485. 00	9, 700. 00
Retail peddlers of manufactured tobacco products	5, 097. 25	4, 019. 50
Retail peddlers of alcoholic products	1, 533. 00	2, 060. 00
Retail leaf tobacco dealers	144, 370. 40	142, 493. 50
Repackers of distilled spirits and wines	7, 955. 00	10, 205. 00
Total	1, 380, 489. 51	1, 393, 147. 45
Merchants and manufacturers (1 per cent)	11, 284, 354. 32	11, 032, 824. 83
Peddlers of merchandise (1 per cent)	553, 153. 12	544, 493. 95
Merchants, manufacturers, and peddlers of merchandise (one-half of 1 per cent, Act 3243)	5, 743, 166. 57	5, 617, 135. 14
Printers and publishers	33, 410. 91	37, 534. 03
Common carriers	214, 843. 65	239, 609. 22
Contractors, warehousemen, and others	938, 150. 59	1, 007, 757. 39
Total	18, 767, 079. 16	18, 479, 354. 56
Commercial brokers	183, 803. 15	223, 535. 34
Stockbrokers	17, 773. 43	20, 984. 47
Real-estate brokers	16, 365. 56	15, 208. 94
Customs and immigration brokers	2, 655. 00	2, 705. 00
Pawnbrokers	23, 225. 00	26, 110. 00
Theaters, museums, cinematographs, and concert halls	32, 985. 00	33, 882. 50
Circuses	925. 00	1, 065. 00
Billiard rooms	25, 084. 25	24, 590. 02
Lawyers, medical practitioners, architects, land surveyors, engineers, and public accountants	134, 474. 65	144, 660. 75
Chiropradists, manicurists, tattooers, and masseurs	1, 775. 00	2, 115. 00
Pharmacists and farriers	26, 505. 72	28, 417. 25
Race tracks	8, 200. 00	8, 710. 00
Cockpits	755, 848. 33	719, 235. 28
Cockfights	137, 555. 77	159, 329. 09
Opticians and dental surgeons	10, 867. 02	24, 545. 98
Midwives and cirujanos ministrantes in medicine and dentistry	2, 878. 13	2, 855. 00
Procuradores judiciales, business agents, insurance agents, and subagents	32, 118. 04	34, 522. 00
Photographers, engravers, and professional appraisers or connoisseurs of tobacco, etc.	21, 315. 00	23, 067. 50
Veterinarians	245. 00	540. 00
Money lenders	29, 375. 00	35, 140. 00
Total	1, 473, 974. 05	1, 501, 519. 12
Banks and bankers	1, 404, 723. 33	1, 421, 594. 74
Insurance companies	111, 278. 93	119, 573. 03
Mires	31, 942. 71	25, 895. 50
Registered dealers in prohibited drugs	18, 159. 38	16, 965. 46
Sponge fisheries	212. 52	358. 52
Firearms license fees	139, 647. 58	142, 137. 88
Pearl fisheries	4, 372. 00	3, 643. 50
Sparring or boxing exhibitions	9, 135. 00	8, 428. 18
Weights and measures	189, 800. 50	187, 658. 14
Total	1, 909, 331. 95	1, 936, 254. 95
Total license, business, and occupation taxes	23, 530, 874. 67	23, 310, 276. 08

Item	1927	1928
Cedulas:		
Class A. Regular at P1.....	P29,205.00	P28,835.00
Class B. Delinquent at P2.....	13,772.00	12,856.00
Class D. Special at P1.....	712.00	758.00
Class E. Fines.....	210.00	501.00
Class F. Regular at P2.....	4,446,464.00	4,490,680.00
Class G. Delinquent at P4.....	683,020.00	718,208.00
Class H. Special at P2.....	26,738.00	28,018.00
Class I. Road and bridge tax, P1.....	19.00	19.00
Class K. Delinquent road and bridge tax, P2.....	54.00	82.00
Class L. Delinquent from May 1 to June 30, P1.50.....	2,386.50	2,206.50
Class M. Delinquent from May 1 to June 30, P3.....	152,046.00	181,041.00
Class N. Delinquent from May 1 to June 30, P1.50.....	1.50	-----
Total cedulas.....	5,354,628.00	5,463,204.50
Franchise taxes	417,019.05	444,670.22
Income tax	3,390,918.32	4,250,537.57
Documentary stamp tax	746,600.60	805,233.93
Inheritance tax	554,801.21	292,914.08
Incidental revenue:		
United States internal revenue collected in the Philippines.....	721,563.46	787,049.02
United States internal revenue collected in the United States.....	10,967.46	7,577.00
Total.....	5,841,870.10	6,627,981.82
Revenue from public forests—		
First group timber.....	338,474.67	409,228.41
Second group timber.....	103,407.25	121,879.08
Third group timber.....	636,452.15	812,478.94
Fourth group timber.....	181,006.64	222,750.94
Firewood (bacauan and tangal).....	28,739.26	28,850.38
Firewood (other wood).....	21,395.45	18,737.36
Minor forest products.....	149,346.74	160,568.54
Lease of forest lands.....	210.47	58.94
Total revenue from public forests.....	1,459,032.63	1,774,552.59
Miscellaneous stamp collections	1,970.32	1,403.58
Service income:		
Justice of the peace fines and fees.....	409,575.40	413,714.55
Radio registration fees.....	3,316.68	5,817.13
Tobacco inspection fees.....	157,523.54	166,445.59
Grand total.....	55,458,890.16	57,983,330.32

APPORTIONMENT OF INTERNAL-REVENUE TAXES AND OTHER COLLECTIONS MADE BY THE BUREAU OF INTERNAL REVENUE

In accordance with the provisions of the internal revenue allotment law (ch. 19 of Act No. 2711), the following distribution was made to the insular, provincial, and municipal governments of the collections effected by the bureau of internal revenue:

Item	Accruing to—		
	Insular	Provincial	Municipal
1927			
Excise taxes:			
Domestic—			
Alcohol and tobacco products.....	P11,988,975.94	-----	-----
Matches.....	42,844.00	-----	-----
Playing cards.....	4,457.50	-----	-----
Cinematographic films.....	887.29	-----	-----
Coal and coke.....	34,902.25	-----	-----
Total.....	12,072,066.98	-----	-----
Imported—			
Alcohol and tobacco products.....	1,492,735.60	-----	-----
Matches.....	478,695.93	-----	-----
Skimmed milk.....	891.60	-----	-----
Playing cards.....	345,966.30	-----	-----
Cinematographic films.....	54,938.00	-----	-----
Kerosene or petroleum.....	1,120,311.47	-----	-----
Naphtha, gasoline, etc.....	P2,656,166.88	-----	-----

Item	Accruing to—		
	Insular	Provincial	Municipal
Excise taxes—Continued.			
Imported—Continued.			
Lubricating oils.....	P (2, 491.28)	P 269, 931.50	-----
Coal and coke.....	210, 768.32	-----	-----
Medicinal preparation containing prohibited drugs.....	117.52	-----	-----
Total.....	3, 701, 933.46	2, 926, 098.38	-----
Total excise taxes.....	15, 774, 000.44	2, 926, 098.38	-----
License, business, and occupation taxes:			
Dealers in alcohol and tobacco products.....	1, 081, 186.85	-----	P 299, 302.66
Merchants, manufacturers, common carriers, etc.....	13, 023, 912.59	-----	-----
One half of one per cent tax under Act 3243.....	5, 168, 849.71	¹ 279, 215.30	¹ 295, 101.56
Occupations, trades, and professions.....	498, 350.70	-----	¹ 975, 623.35
Banks and bankers.....	1, 404, 723.33	-----	-----
Insurance companies.....	111, 278.93	-----	-----
Mines.....	31, 942.71	-----	-----
Registered dealers in prohibited drugs.....	18, 159.38	-----	-----
Boxing or sparring exhibitions.....	9, 135.00	-----	-----
Sponge fisheries.....	42.52	85.00	85.00
Pearl fisheries.....	(1)	3, 995.00	377.00
Weights and measures.....	(1)	88, 015.88	101, 844.62
Firearm fees under Act 3097.....	139, 647.58	-----	-----
Total license, business, and occupation taxes.....	21, 487, 229.30	371, 311.18	1, 672, 334.19
Cedulas.....	(1)	3, 811, 753.75	1, 542, 874.25
Franchise tax.....	157, 575.55	¹ 15, 043.12	¹ 244, 400.38
Income tax.....	3, 390, 918.32	-----	-----
Documentary stamp tax.....	746, 600.50	-----	-----
Inheritance tax.....	554, 801.21	-----	-----
Internal revenue allotment.....	(3, 164, 083.55)	¹ 1, 538, 280.67	¹ 1, 625, 802.88
Total revenue from taxation.....	38, 947, 041.87	8, 662, 487.10	5, 085, 411.70
Incidental revenue:			
United States internal revenue collected in the Philippines.....	721, 563.46	-----	-----
United States internal revenue collected in the United States.....	10, 967.46	-----	-----
Revenue from public forests.....	1, 459, 003.50	5.81	23.32
Miscellaneous stamp collections.....	1, 970.32	-----	-----
Service income:			
Justice of the peace fines and fees.....	396, 659.61	32.24	12, 883.55
Radio registration fees.....	² 3, 316.68	-----	-----
Tobacco inspection fees.....	157, 523.54	-----	-----
Grand total.....	41, 698, 046.44	8, 662, 525.15	5, 098, 318.57
1928			
Excise taxes:			
Domestic—			
Alcohol and tobacco products.....	12, 250, 732.04	-----	-----
Matches.....	94, 446.00	-----	-----
Playing cards.....	1, 436.00	-----	-----
Cinematographic films.....	1, 262.39	-----	-----
Coal and coke.....	13, 200.01	-----	-----
Total.....	12, 361, 076.44	-----	-----
Imported—			
Alcohol and tobacco products.....	1, 739, 804.42	-----	-----
Matches.....	546, 861.25	-----	-----
Skimmed milk.....	459.80	-----	-----
Playing cards.....	421, 838.27	-----	-----
Cinematographic films.....	59, 825.94	-----	-----
Kerosene or petroleum.....	1, 210, 584.87	-----	-----
Naphtha, gasoline, etc.....	(1, 033.65)	3, 244, 027.86	-----
Lubricating oils.....	(196.76)	386, 505.62	-----
Coal and coke.....	250, 129.39	-----	-----
Medicinal preparations containing prohibited drugs.....	71.03	-----	-----
Total.....	4, 228, 324.56	3, 630, 533.48	-----
Total excise taxes.....	16, 589, 401.00	3, 630, 533.48	-----

¹ The provincial shares of the cities of Manila and Baguio and road and bridge shares in cedula collections of Corregidor, Olongapo, and the other municipalities mentioned in Act 3382 are considered as municipal funds.

² Only 20 per cent of this collection (or P663.34, accrues to the insular government, the remaining 80 per cent, or P2,653.34, being transferred to the radio broadcasting fund.

Item	Accruing to—		
	Insular	Provincial	Municipal
License, business, and occupation taxes:			
Dealers in alcohol and tobacco products.....	P1,089,462.56	-----	P303,684.89
Merchants, manufacturers, common carriers, etc....	12,862,219.42	-----	-----
One-half of 1 per cent tax under Act 3243.....	5,055,421.64	¹ P273,087.89	¹ 288,625.61
Occupations, trades and professions.....	567,307.23	-----	934,211.89
Banks and bankers.....	1,431,594.74	-----	-----
Insurance companies.....	119,573.03	-----	-----
Mines.....	25,895.50	-----	-----
Registered dealers in prohibited drugs.....	16,965.46	-----	-----
Boxing or sparring exhibitions.....	8,428.18	-----	-----
Sponge fisheries.....	71.72	143.40	143.40
Pearl fisheries.....	(¹)	3,583.50	60.00
Weights and measures.....	(¹)	87,192.19	100,465.95
Firearm fees under Act 3097.....	142,137.88	-----	-----
Total license, business, and occupation taxes.....	21,319,077.36	364,006.98	1,627,191.74
Cedulas.....	(¹)	3,855,760.00	1,607,444.50
Franchise tax.....	169,337.66	¹ 17,352.95	¹ 257,979.61
Income tax.....	4,250,537.57	-----	-----
Documentary stamp tax.....	805,233.93	-----	-----
Inheritance tax.....	292,914.08	-----	-----
Internal revenue allotment.....	(3,164,083.55)	¹ 1,538,280.63	¹ 1,625,802.92
Total revenue from taxation.....	40,302,418.05	9,405,934.04	5,118,418.77
Incidental revenue:			
United States internal revenue collected in the Philippines.....	787,049.02	-----	-----
United States internal revenue collected in the United States.....	7,577.00	-----	-----
Revenue from public forests.....	1,774,395.89	31.27	125.43
Miscellaneous stamp collections.....	1,403.58	-----	-----
Service income:			
Justice of the peace fines and fees.....	399,249.14	25.84	14,439.57
Radio registration fees.....	³ 5,817.13	-----	-----
Tobacco inspection fees.....	166,445.59	-----	-----
Grand total.....	43,444,355.40	9,405,991.15	5,132,983.77

¹ The provincial shares of the cities of Manila and Baguio and road and bridge shares in cedula collections of Corregidor, Olongapo, and the other municipalities mentioned in act 3382 are considered as municipal funds.

² Only 20 per cent of this collection, or P1,163.43, accrues to the insular government, the remaining 80 per cent, or P4,653.70, being transferred to the radio broadcasting fund.

During the year just ended the total collection of P57,983,330.32 was made, in comparison with the collection of P55,458,890.16 corresponding to the previous year, or an increase of P2,524,440.16. Of this increase P1,746,308.96 corresponded to the insular treasury, the insular share for 1928 being P43,444,355.40, as compared with P41,698,046.44, the insular share for 1927; P743,466 corresponded to the provincial treasuries, the share for 1928 being P9,405,991.15, while that for 1927 was P8,662,525.15; and P34,665.20 corresponded to the municipal treasuries, the share for 1928 being P5,132,983.77 and that for 1927 was P5,098,318.57. So far the year 1928 holds the record for the largest internal-revenue collection.

COST OF COLLECTION

The last 10 years show fluctuations in the cost of collecting revenue for the government, the figures for each peso collected being as follows: 1.31 centavos in 1919; 1.27 centavos in 1920; 1.80 centavos in 1921; 1.62 centavos in 1922; 1.49 centavos in 1923; 1.40 centavos in 1924; 1.50 centavos in 1925; 1.57 centavos in 1926; 1.53 centavos in 1927; and 1.62 centavos in 1928. The operation of the bureau of internal revenue during the year cost the insular government P937,865.14, in comparison with the cost of P848,888.86 during 1927, or an increase of P88,976.28. This increase is mainly accounted for by the employment of additional personnel, the expenditure of a larger sum for traveling expenses of personnel in order to insure efficiency of collection, and the larger expense for consumption of supplies and materials. The increasing activities

of the bureau justified the employment of more personnel; the need for the mobility of the field men of the bureau in their inspection work called for a larger disbursement of traveling expenses; and the printing of more internal-revenue stamps, including strip stamps, documentary stamps, and the stamps on playing cards used for the first time in 1928, gave rise to a larger expense in the item of consumption of supplies and materials.

ALCOHOLIC PRODUCTS

Distilled spirits.—Comparing the fiscal years 1927 and 1928, it is noted that during the former year 26,438,687 proof liters of distilled spirits were removed from distilleries, whereas 28,671,463 proof liters were removed during the year under review, or an increase of 2,232,776 proof liters. These figures include not only spirits subject to tax but also those exempt from tax, as well as by-products such as fusel oil.

In so far as the revenue is concerned, ₡4,978,983.17 were collected as taxes on domestic distilled spirits in 1928, in comparison with ₡4,699,677.86 collected in 1927; and the taxes collected on imported distilled spirits amounted to ₡367,724.20 in 1928 and ₡334,543.11 in 1927. The sum of ₡367,724.20 was collected on 464,441 proof liters, whereas the amount of ₡334,543.11 was collected on 422,172 proof liters.

The quantity of fusel oil removed for export to the United States during the year 1927 was 21,453.38 gage liters, which quantity was produced from 39,755 proof liters of distilled spirits. No fusel oil was produced or exported during the year 1928.

At the end of the year under discussion there were in operation throughout the islands 87 registered stills, as compared with 86 in operation on December 31, 1927; 83 on December 31, 1926; 80 on December 31, 1925; 80 on December 31, 1924; 79 on December 31, 1923; and 77 on December 31, 1922.

Wines.—The local consumption of still wines and imitation wines was 1,876,376 gage liters in 1928 and 1,794,590 gage liters in 1927, or a per capita consumption of 0.15 gage liter.

Fermented liquors.—During 1928 the quantity of domestic and imported beer removed for domestic consumption reached 4,332,988.20 gage liters, as compared with 4,034,738.90 gage liters removed during the previous year, or a per capita consumption of 0.34 and 0.33 gage liter, respectively. In addition to this quantity, local brewers produced for export and consumption on the high seas 168,642 gage liters in 1928 and 155,555.60 gage liters in 1927.

TOBACCO PRODUCTS

Smoking and chewing tobacco.—The quantities of domestic and imported smoking and chewing tobacco on which taxes were collected during the years 1927 and 1928 were as follows:

Kind	1927			1928		
	Domestic	Imported	Total	Domestic	Imported	Total
Smoking tobacco.....	<i>Kilos</i> 496, 647	<i>Kilos</i> 40, 234	<i>Kilos</i> 536, 881	<i>Kilos</i> 523, 194	<i>Kilos</i> 40, 212	<i>Kilos</i> 563, 406
Chewing tobacco.....	255, 942	427, 655	683, 597	264, 272	434, 029	698, 301
Total.....	752, 589	467, 889	1, 220, 478	787, 466	474, 241	1, 261, 707
Increase.....				34, 877	6, 352	41, 229
Per cent of increase.....				4.63	1.36	3.38

Besides the quantity of smoking and chewing tobacco removed for domestic consumption, local manufacturers exported 16,416 kilos of smoking tobacco in 1927 and 23,548 kilos in 1928, or an increase of 43.45 per cent.

Stripped and partially manufactured tobacco.—During the year under discussion there were exported 2,586,823 kilos of stripped and partially manufactured tobacco, showing an increase of 133.66 per cent over the exportation of 1,107,067 kilos made during the previous year.

Leaf tobacco.—There was a decrease of 16.99 per cent in the exportation of leaf tobacco during 1928, the quantity exported being 18,811,627 kilos as against 22,661,659 kilos exported during the previous year.

Cigars.—During 1928 the total production of cigars was 331,817,373, whereas during the previous year the production was 317,465,629, or a slight increase for the former year of 4.52 per cent. Of the number of cigars produced in 1928, 106,850,178 cigars, or 32.2 per cent of the total production, were consumed in the Philippine Islands; 35,539,874 cigars, or 10.71 per cent, were exported to foreign countries; and 189,427,321 cigars, or 57.09 per cent, were shipped to the United States. During the previous year, 108,967,193 cigars, or 34.32 per cent, were consumed in the Philippine Islands; 34,684,101, or 10.93 per cent, were exported to foreign countries; and 173,814,335, or 54.75 per cent, were shipped to the United States.

Cigarettes.—The total production of cigarettes in 1928 was 5,110,187,247, and during the previous year it was 4,995,022,912, or an increase of 115,164,335, representing 2.31 per cent. Of the number produced during 1928, 4,880,512,372 cigarettes, or 95.50 per cent, were consumed in the Philippine Islands; 227,266,075, or 4.45 per cent, were exported to foreign countries; and 2,408,800, or 0.05 per cent, were shipped to the United States. In 1927, 4,924,494,088 cigarettes, or 98.59 per cent, were consumed in the Philippine Islands; 68,376,829, or 1.37 per cent, were exported to foreign countries; and 2,151,995, or 0.04 per cent, were shipped to the United States.

MATCHES

The past year showed an increase in the number of gross boxes of matches removed for domestic consumption, from 107,110 gross boxes of domestic manufacture removed in 1927, a figure which represented 8.21 per cent of the total removed for domestic consumption, to 235,975 gross boxes, or 14.72 per cent of the total removed for domestic consumption. In the case of the imported matches, 1,196,739.83 gross boxes were removed for domestic consumption in 1927, or 91.79 per cent of the total removed for domestic consumption, whereas the removal in 1928 was 1,367,193.16 gross boxes, or 85.28 per cent of the total removed for domestic consumption. The total increase in the number of gross boxes registered in 1928 as compared with the number removed in 1927 was 299,318.33 gross boxes, or an increase of 22.96 per cent.

It is pleasing to note that the local match manufacturing industry is apparently gaining headway in that the number of gross boxes removed for domestic consumption in 1928 was more than twice the number removed in 1927.

LICENSE, BUSINESS, AND OCCUPATION TAXES

Dealers in alcohol and tobacco products.—There were collected as privilege taxes on dealers in alcohol and tobacco products during the fiscal year 1928, ₱1,393,147.45, in comparison with ₱1,380,489.51 collected during the previous year, an increase of ₱12,657.94, or 0.92 per cent. Of the total collection for the year under review, 30.77 per cent was paid by dealers in distilled spirits and wines; 39.71 per cent by dealers in tobacco products; 26.65 per cent by dealers in fermented liquors, tuba, basi, tapuy, etc.; and 2.87 per cent by manufacturers and peddlers of liquors and tobacco products. For the year 1927 the distribution was as follows: 29.93 per cent was paid by dealers in distilled spirits and wines; 38.03 per cent by dealers in tobacco products; 26.44 per cent by dealers in fermented liquors, tuba, basi, tapuy, etc.; and 5.6 per cent by manufacturers and peddlers of liquors and tobacco products.

Merchants, manufacturers, common carriers, etc.—During the year 1928 there were collected as percentage taxes on merchants, manufacturers, common carriers, and other persons subject to the percentage tax of 1 per cent, together with the additional tax of one-half of 1 per cent provided by Act No. 3065, as amended by Acts Nos. 3183 and 3243, the sum of ₱18,479,354.56, as compared with the collection of ₱18,767,079.16 made during the previous year, or a decrease of ₱287,724.60, representing 1.53 per cent. This decrease can be traced to the lower prices paid for hemp, copra, sugar, and leaf tobacco, as compared with the prices of 1927, to direct transactions between sellers in the Philippine Islands and buyers in the United States, made possible by the development of commercial facilities, to the growth of the indent business, to the operation of additional ports, and the direct purchase by provincial

merchants from importers, the last two facts being responsible, to a certain extent, for the reduction in the number of times goods change hands.

It may be mentioned that the sales tax is the largest source of revenue, and is the tax that has given rise to much litigation. Because of these facts, the undersigned, in conjunction with the collector of internal revenue, has made a special study and submitted recommendations to His Excellency the Governor General calculated to correct the glaring defects of the tax.

Of the amount of ₱18,479,354.56 above mentioned, 62.65 per cent was paid by merchants, manufacturers, and peddlers in the form of 1 per cent tax, the additional one-half of 1 per cent representing 30.4 per cent; 5.65 per cent was collected from printers, publishers, contractors, warehousemen, hotel and restaurant keepers, etc.; and 1.3 per cent from common carriers. During the previous year, the taxes collected from merchants, manufacturers, and peddlers was 63.08 per cent of the total amount of ₱18,767,079.16, the additional one-half of 1 per cent constituting 30.6 per cent of the said amount; the collection from printers, publishers, contractors, warehousemen, hotel and restaurant keepers, etc., being 5.18 per cent; and the collection from common carriers constituting 1.14 per cent of the said amount.

Occupations, trades, and professions.—On occupations, trades, and professions privilege taxes in the amount of ₱1,501,519.12 were collected during 1928, in comparison with the collection of ₱1,473,974.05 for 1927, or an increase of ₱27,545.07, representing 1.87 per cent. Of the collection for 1928, 56.51 per cent was paid by proprietors of cockpits; 17.3 per cent by commercial, stock, and real-estate brokers; and 26.19 per cent by lawyers, doctors, civil engineers, surveyors, etc. Of the collection for 1927, 60.61 per cent was paid by proprietors of cockpits; 14.79 per cent by commercial, stock, and real-estate brokers; and 24.60 per cent by lawyers, doctors, civil engineers, surveyors, etc.

Pursuant to the provisions of the internal revenue law, the privilege tax collections from owners of cockpits and the taxes on cockfights accrue entirely to the treasuries of the various municipalities in which such taxes are collected. Nine hundred and five municipalities and townships availed themselves of the provisions of the law authorizing the imposition by municipal councils of additional taxes on cockpits. The rates of additional privilege taxes thus imposed ranged from ₱6 to ₱16,000 per annum. There were 172 municipalities, townships, and municipal districts in which no cockpit tax receipts were issued during the period covered by this report.

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CEDULAS

The cedula tax collected during the year reached ₱5,463,204.50, in comparison with ₱5,351,628 collected during the preceding year, an increase of ₱108,576.50, representing 2 per cent. The number of cedulas sold during the year under consideration was 2,536,808, in comparison with 2,496,491 cedulas sold in 1927, an increase of 40,307 cedulas, or 1.61 per cent.

BANKS AND BANKERS

The following comparative statement, based upon taxes assessed and collected, shows the average amount of capital employed by, average amount of deposits with, and average amount of circulation of banks during the period from July 1, 1926, to June 30, 1927, and from July 1, 1927, to June 30, 1928:

	July 1, 1926, to June 30, 1927	July 1, 1927, to June 30, 1928
Average capital.....	₱41,834,735.25	₱46,485,463.37
Average deposits.....	137,315,357.37	151,392,692.32
Average circulation.....	35,536,161.52	27,814,537.49

INSURANCE COMPANIES

The following table, based on the statements rendered, shows the total amount of each kind of insurance on which premiums were paid and the average rate of premiums paid during the calendar years 1926 and 1927:

Kind of insurance	1926		1927	
	Total amount of insurance	Average rate of premium	Total amount of insurance	Average rate of premium
		<i>Per cent</i>		<i>Per cent</i>
Fire.....	P399,044,238.57	1.02	P417,759,935.85	1.04
Marine.....	402,922,757.63	.44	464,032,541.68	.43
Life.....	82,366,493.62		65,454,422.67	
Accident.....	1,926,952.00	2.44	2,462,995.00	2.40
Fidelity and surety.....	16,455,982.50	2.05	25,479,883.11	1.44
Typhoon and earthquake.....	30,123,497.00	.37	31,640,642.80	.30
Motor cars.....	2,844,504.65	3.21	2,972,023.13	3.38
Personal baggage.....	763,210.00	.33	361,135.00	.94
War (marine).....	9,259,361.00	.24	14,841,231.00	.22

INCOME TAX

The year 1928 registered the second largest income-tax collection since the income tax law was enforced in the Philippine Islands. The largest collection was made in 1921 when ₱4,880,370.25 were brought to the public coffers. During the year under review the collection in this item reached ₱4,290,537.57, which, compared with the collection during 1927 amounting to ₱3,390,918.32, shows an increase of ₱899,619.25.

This is the first time that the income-tax collection has reached and exceeded the ₱4,000,000 mark since the year 1921. The large collection was brought about by the high prices paid for sugar in 1927, in comparison with the prices for 1926, although the prices paid for hemp, copra, and coconut oil in 1927 were very much lower than those paid during the year 1926.

During the year under review there were filed 20,449 (7,058 taxable and 13,391 exempt) individual returns, and 4,689 (2,902 taxable and 1,787 exempt) corporation returns, or a total of 25,138 individual and corporation returns. During the preceding year 1927 there were filed 20,438 (7,755 taxable and 12,683 exempt) individual returns, and 4,568 (2,790 taxable and 1,778 exempt) corporation returns, or a total of 25,006 returns. While the total number of returns filed during 1928 exceeded by 132 the number of returns filed during 1927, yet the total number of taxable individual and corporation returns filed during 1928 were less by 585 than the taxable returns filed during the year 1927, and the number of exempt individual and corporation returns filed in 1928 exceeded by 717 the number of exempt returns filed during the preceding year.

The decrease in the number of taxable individual returns filed in 1928 is accounted for by the much larger number of delinquent returns filed in 1927 in comparison with that filed in 1928, the number for 1927 being 2,188 and that for the year under consideration, 1,475. It may be mentioned that many of the 2,188 delinquent returns were taxable, whereas of the delinquent returns for 1928 the majority were exempt. However, in spite of the decrease in the number of taxable individual and corporation returns and the increase in the number of exempt individual and corporation returns, there was an increase of ₱6,565,747.56 in the amount of income reflected by taxable individual returns corresponding to the year 1927 over the income reported in the returns for 1926, the income for the latter year being ₱90,352,622.95. In so far as the taxable corporation returns are concerned, the amount of income reported in them for 1927 showed an increase of ₱11,256,174.05 over the income reported for 1926, which was ₱53,416,839.09.

In this connection, the undersigned feels an apprehension over the income-tax prospects for 1929 in view of the typhoon which swept parts of the Bicol region, the Visayan Islands, and Mindanao in November, 1928, and which caused a considerable amount of loss and damage to merchants and farmers in those regions.

INHERITANCE TAX

During the year the bureau collected the sum of ₱292,914.08 as inheritance tax and penalties, as against the sum of ₱554,801.21 collected during the previous year, or a marked decrease of ₱261,887.13. This decrease is attributable to the fact that the revenue from this source is contingent upon the death of persons in affluence.

In view of the peculiar nature of the inheritance tax, it is difficult to predict with precision the trend of future collections from this revenue. In fact, there has been a considerable fluctuation in the collection of this tax during the previous years.

There were 1,499 inheritance-tax returns filed during the year involving a total net inventoried value of the estates in the amount of ₱19,938,214.13. In the preceding year there were filed only 899 inheritance-tax returns covering a total net inventoried value of the estates in the amount of ₱20,283,104.30.

FRANCHISE TAX

Of the total collection of ₱444,670.22 as franchise taxes in 1928, ₱169,337.66 accrued to the insular government, ₱207,661.34 to the city of Manila, ₱17,352.95 to Provinces, and ₱50,318.27 to other municipalities.

PEARL FISHING

Under the provisions of Act No. 2604 there was collected during 1928 the amount of ₱3,643.50, as compared with ₱4,372 collected in 1927, or a decrease of ₱728.50. This collection accrued intact to the treasuries of the respective Provinces where collected.

SPONGE FISHING

Pursuant to Act No. 2584, the fees and penalties for sponge fishing during 1928 amounted to ₱358.52, of which 20 per cent, or ₱71.72, accrued to the insular treasury, 40 per cent, or ₱143.40, to the provincial treasuries, and 40 per cent, or ₱143.40, to the municipal treasuries concerned.

FIREARMS FEES

The total amount of firearms fees collected in 1928, pursuant to Act No. 3097, amounted to ₱142,137.88, as compared with ₱139,647.58 collected in 1927. The 1928 collection consisted of ₱133,369.49 as taxes and ₱8,768.39 as penalties.

SPARRING OR BOXING EXHIBITIONS

Under the provisions of Act No. 2984 the taxes and penalties collected on sparring or boxing exhibitions during 1928 amounted to ₱8,428.18, as compared with ₱9,135 collected during 1927, or a decrease of ₱706.82.

RADIO REGISTRATION FEES

Pursuant to the provisions of Act No. 3338, approved December 7, 1926, and effective on that same date, an annual registration fee of ₱2 for crystal receivers and ₱10 for sets using a vacuum tube or tubes is payable on each radio receiving set. This registration fee is payable quarterly in advance during the first 20 days of each quarter, a surcharge of 20 per cent being added whenever the fee is not paid within the time prescribed by law. According to the terms of the law, 20 per cent of the collection accrues to the general fund and the remaining 80 per cent is set aside as a special fund to be known as the radio broadcasting fund. The total collection made amounted to ₱5,817.13, of which ₱5,497.40 represented fees and ₱319.73 penalties. Because of the provisions of the law, only ₱1,163.43 accrued to the general fund and ₱4,653.70 to the radio broadcasting fund. The number of radio sets registered during the year was 518, of which 468 had tube receivers and 50 crystal receivers.

THE TOBACCO-PROMOTION WORK OF THE BUREAU

The Philippine cigar trade in the United States.—There were exported to the United States during 1928, 187,360,260 cigars, as compared with 173,190,208 sent to that market in 1927, or an increase of 14,170,052. This increase indicates that the Philippine cigar is regaining part of the ground lost by it in the American market on account of the keen competition offered by the American machine-made 5-cent cigar, which was produced as a result of the reduction of the tax on cigars, in accordance with the Federal revenue act of 1926 that took effect on March 29, 1926. The reaction may be traced, on the one hand,

to the efforts of many Philippine manufacturers who sent sound products to that market for the maintenance of the good reputation of Philippine cigars, and, on the other hand, to the low prices at which the Philippine cigar is sold to American importers, enabling them to secure a large margin of profit.

During the year, Messrs. C. A. Bond and D. F. Morris, Philippine tobacco agents in the United States, had to travel more extensively than in the previous year through the various parts of the country, in relation to the promotion of the Philippine cigar trade in the American market. The extent of their travels during the two years can be seen from the following statement:

	1927	1928	Increase
Number of States covered.....	20	22	2
Number of cities or districts visited.....	81	123	42
Number of dealers interviewed.....	317	517	200

While engaged in the above-mentioned work, Messrs. Bond and Morris made efforts to reach districts where Philippine cigars had not yet been introduced; and in their interviews with cigar dealers, many of the latter expressed a desire to give the Philippine product a trial. Further inquiry divulged the fact that the Philippine cigars, once known, acquire steady customers, especially when the quality is dependable. On the whole, the reports of Messrs. Bond and Morris indicate a rather promising future for Philippine cigars in the United States. One favorable aspect of the trade in 1928 was that there were no stocks of the product in damaged condition in the market, so that dealers in Manila were reassured that this product is worth while handling.

In Manila the best efforts have been exerted in connection with the inspection work to prevent, as nearly as practicable, the sending to the American market of defective tobacco products. On various occasions several manufacturers attempted to send cigars with a classification on higher than what they deserve, attempts which were opposed by the bureau of internal revenue. At first the manufacturers concerned considered that the bureau was acting rather arbitrarily, but later on they were convinced that the wrong classification of cigars would not only prejudice their business, but would also ultimately lead to the detriment of the Philippine cigar trade in general. The collector of internal revenue, in cooperation with the tobacco board, repeatedly called the attention of the manufacturers to the fact that the competition in the United States market should be made on the basis of quality rather than of price.

The Philippine tobacco trade in China.—Although the political unrest in China had apparently come to an end during the year, the Chinese market did not show any improvement in so far as the Philippine tobacco trade in that country is concerned. The gloomy prospect of the Philippine produce is accountable by the very high duties imposed on tobacco products imported into that country.

The publicity campaign under Act No. 3424.—Act No. 3424 sets aside ₱300,000 for propaganda work to be undertaken in foreign countries in behalf of Philippine tobacco products. At the end of the year 1928, ₱33,085.33 were spent for this purpose, so that there remains a balance of ₱266,914.67. The propaganda will be undertaken by means of newspaper advertising, magazine advertising, trade-journal advertising, and billboard advertising. Up to this time the work has been carried on only in the United States.

The tobacco board.—During the year under review the membership of the tobacco board continued as follows: Mr. Juan Posadas, jr., collector of internal revenue, as ex officio chairman, and Dr. S. Youngberg, director of agriculture, Mr. Fidel A. Reyes, director of the bureau of commerce and industry; Messrs. P. A. Meyer and Felix Valencia, representatives of the Manila Tobacco Association, and Mr. Vicente T. Fernandez and Dr. L. O. Manzanillo, representatives of the tobacco producers and growers, as members. During the absence of Mr. P. A. Meyer, who left for the United States in May, 1928, and stayed abroad until the end of the year, Mr. C. Timmerberg was designated by the Manila Tobacco Association to take Mr. Meyer's place on the board.

The tobacco inspection fund.—The income accruing to the tobacco inspection fund from January 1 to December 31, 1928, was ₱166,445.59, which, added to a balance of ₱39,063.97 on January 1, 1928, gave a total sum available for expenditure of ₱205,509.56. The expenses during the year reached ₱156,026.27,

so that there was a balance of ₱49,483.29 on December 31, 1928. The total sum available for expenditure in 1927 was ₱191,464.81, consisting of a balance on hand on January 1, 1927, of ₱38,249.27, and collections during the year of ₱153,215.54. The annual expenditures reached ₱152,400.84, so that there was a balance at the end of the year 1927 of ₱39,063.97.

BUREAU OF PRINTING

ACTIVITIES

Requisitions for printing and binding to the aggregate total cost of ₱1,682.-778.20 were executed by this bureau during the fiscal year for the insular, provincial, and municipal governments. The work consists of official publications such as reports, bulletins, textbooks, manuals, handbooks, and pamphlets of different nature, salable public documents, regular and accounting forms of diverse sizes, electrotypes and photoengraving plates. There had also been printed 2,256,335 copies of official ballots, 152,078 sample ballots, and 5,988,220 copies of election forms for the city of Manila and all regularly organized Provinces for the general election held during the year.

A partial list showing the most important publications printed by this office during the year, is as follows:

Title	Quantity	Number of pages	Size of page
GOVERNOR GENERAL			
Auditor's Report, Supplement 1, 1926, bureau of audits.....	519	324	<i>Inches</i> 9½ x 12
Report of Mr. Hammond to the Governor General, executive appropriation.....	2,000	90	6 x 9½
Message of the Governor General, H. L. Stimson, to the Philippine Legislature, first session, 1928 (English), executive appropriation.....	1,700	24	7½ x 16½
Message of the Governor General, H. L. Stimson, to the eighth Philippine Legislature, first session, 1928 (English), executive appropriation.....	500	24	7½ x 10½
Budget for 1929, Philippine Islands, executive appropriation.....	1,200	436	8 x 12
Message of the Governor General, H. L. Stimson, to the eighth Philippine Legislature, first session, 1928 (Spanish), executive appropriation.....	1,300	24	7½ x 10½
Twenty-eighth Annual Report of the Bureau of Civil Service for 1927, bureau of civil service.....	1,600	174	6 x 9½
Report of the Auditor for the Philippine Islands for Fiscal Year Ended Dec. 31, 1927, central government, bureau of audits.....	650	348	9½ x 12
Instructions to Local Civil Service Examining Committees, bureau of civil service.....	3,000	44	6 x 9½
DEPARTMENT OF THE INTERIOR			
Diary Book, 1928-29, Philippine Constabulary.....	500	232	3¾ x 5½
Apprentice Book No. II, board of examiners.....	1,000	120	6½ x 9¼
Examination note books, board of examiners.....	6,000	16	6½ x 9¼
Telegraphic Code Book of the Philippine Constabulary.....	293	100	5 x 9½
Official Constabulary Register for 1928, Philippine Constabulary.....	750	160	6 x 9½
The Development and Progress of the Filipino Women, public welfare commissioner.....	5,000	86	6 x 9½
Manual of Instructions of Offices, Puericulture Center, public welfare commissioner.....	2,000	112	4½ x 7¼
Seventeenth Annual Report of the Public Welfare Commissioner, 1927, public welfare commissioner.....	1,500	296	6 x 9½
DEPARTMENT OF PUBLIC INSTRUCTION			
Index to Bulletin, Vol. V, Philippine health service.....	2,500	8	6 x 9½
Philippine Public School, Vol. I, No. 2, February, 1928, bureau of education.....	2,000	16	8¾ x 12
Philippine Prose and Poetry, bureau of education.....	30,000	180	5 x 7¼
Fourth Annual Announcement, Summer School, 1928, general office, University of the Philippines.....	3,000	24	6 x 9½
Monthly Bulletin, Vol. 7, No. 7, July, 1927, Philippine health service.....	2,500	48	6 x 9½
Selected Short Poems, bureau of education.....	3,000	144	5 x 7¼
Philippine Public School, Vol. I, No. 3, March, 1928, bureau of education.....	27,000	64	7½ x 10½
Annual Report of the Director of Philippine Health Service.....	300	24	6 x 9½
Official Roster of the Board of Regents, Faculty Members, Officers, and Employees, University of the Philippines.....	800	68	6 x 9½
Health: A Manual for Teachers, Philippine health service.....	3,000	56	6 x 9½
Monthly Bulletin, Vol. 7, No. 8, August, 1927, Philippine health service.....	2,500	68	6 x 9½

Title	Quantity	Number of pages	Size of page
DEPARTMENT OF PUBLIC INSTRUCTION—continued.			<i>Inches</i>
Bulletin No. 41 (revised), Bureau of Education Service Manual bureau of education.....	9,500	494	5½ x 8½
P. H. S. Form N. 169, Health Officer's Diary, Philippine health service.....		256	4½ x 6
Schedule of Classes First Semester, 1928-29, University of the Philippines.....	3,000	24	5½ x 9¼
Monthly Bulletin, Vol. 7, No. 9, September, 1927, Philippine Health service.....	2,500	104	6 x 9½
Monthly Bulletin, Vol. 7, No. 11, November, 1927, Philippine health service.....	2,500	72	6 x 9½
Philippine Achievement Tests, Form II, of Series "C" Language Dictation and Composition, bureau of education.....	10,000	8	8¾ x 11½
Monthly Bulletin, Vol. 7, No. 10, October, 1927, Philippine health service.....	2,500	52	6 x 9½
P. H. S. Form No. 70, Manila Revised Monthly Health Report, Philippine health service.....	250	24	8½ x 11
Monthly Health Report of the Director of Health or District Health Officers, Philippine health service.....	50,000	44	8½ x 11
Philippine Prose and Poetry, bureau of education.....	5,000	178	5 x 7¼
Health: A Manual for Teachers, bureau of education.....	30,000	56	6 x 9½
Elementary Home Economics, bureau of education.....	5,000	330	6 x 9½
Monthly Bulletin, Vol. VII, No. 5, May, 1927, Philippine health service.....	2,500	28	6 x 9½
Transactions of the Health Officers, Second General Assembly, held at Baguio, Benguet, May 3-14, 1927, Philippine health service.....	2,500	244	6 x 9½
Monthly Bulletin, Vol. VII, No. 7, January, 1928, Philippine health service.....	2,500	60	6 x 9½
Monthly Bulletin, Vol. VII, No. 12, December, 1927, Philippine health service.....	2,500	76	6 x 9½
The Philippine Islands, Information for Americans Thinking of Entering Philippine Teaching Service, bureau of education.....	1,100	32	4¼ x 9½
Monthly Bulletin, Vol. VIII, No. 2, February, 1928, Philippine health service.....	2,500	64	6 x 9½
Schedule of Classes, Second Semester, 1928-29, University of the Philippines.....	3,500	28	5½ x 9¼
Twenty-eighth Annual Report of the Director of Education for 1927.....	6,000	268	6 x 9½
Manual for Mechanical Drawing in Elementary Schools, bureau of education.....	3,200	36	6 x 9½
Reprinting Course of Study in Music for Normal School, bureau of education.....	600	36	6 x 9½
Monthly Bulletin, Vol. VIII, No. 3, March, 1928, Philippine health service.....	2,500	56	6 x 9½
Monthly Bulletin, Vol. VIII, No. 4, April, 1928, Philippine health service.....	2,500	44	6 x 9½
DEPARTMENT OF FINANCE			
Report of the Department of Finance, bureau of internal revenue.....	1,500	40	6 x 9½
Manual of Chinese Studies, bureau of internal revenue.....	1,000	32	5¼ x 8
Bureau of printing sales stock:			
Manual of Instructions to Provincial and Municipal Treasurers.....	2,500	698	6 x 9½
Ley Electoral (Spanish).....	5,000	116	6 x 9½
Election Law (English).....	5,000	116	6 x 9½
Provincial Circular for General Election (English).....	5,000	48	6 x 9½
Provincial Circular for General Election (Spanish).....	5,000	52	6 x 9½
Report of the Auditor for the Philippine Islands, Supplement II (Municipal), 1926.....	1,134	116	6 x 9½
Official Roster, Dec. 31, 1927.....	600	308	6 x 9½
Bureau of printing calendars, 1928.....	13,000	12	13½ x 22¼
Executive Orders and Proclamations, 1927 (English and Spanish).....	420	432	5¼ x 8
Philippine Reports, Vol. 49 (English).....	1,500	1,200	6 x 9½
Philippine Reports, Vol. 49 (Spanish).....	1,500	1,258	6 x 9½
Annual Report of the Insular Treasurer of the Philippine Islands for 1927.....	500	130	6 x 9½
Annual Report of the Insular Collector of Customs, 1927.....	2,000	360	6 x 9½
Twenty-fourth Annual Report of the Collector of Internal Revenue, 1927.....	1,000	140	6 x 9½
DEPARTMENT OF JUSTICE			
Administrative Order No. 23, Reglamento para el Registro de los Sacerdotes (Spanish), Philippine library and museum.....	3,000	16	6 x 9½
Reprinting P. S. C. Form No. 44, Annual Report of Electric and Ice Plant, public service commission.....	2,000	32	9½ x 12
Brief No. 29867, Pedro Villa Abrilla et al. v. The Director of Lands (English and Spanish), bureau of justice.....	50	504	6 x 9½
Annual Report of the Attorney General, 1927, bureau of justice.....	300	92	6 x 9½
Order No. 2, Transportation Rates, Rules and Regulations, public service commission.....	3,000	140	5¼ x 8

Title	Quantity	Number of pages	Size of page
DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES			<i>Inches</i>
Bulletin No. 13, Land Survey Charges and Costs, bureau of lands	1,000	100	6 x 9½
Bulletin For September to December, 1926, weather bureau	1,000	128	9½ x 12
Circular No. 199, bureau of agriculture	1,000	54	6 x 9½
Agricultural Review, Vol. XX, No. 4, fourth quarter, 1927, bureau of agriculture	1,000	118	7½ x 10½
Monthly Bulletin, May-August, 1926, weather bureau	1,000	120	9½ x 12
Journal of Science, Vol. 34, No. 4, bureau of science	1,300	180	7½ x 12
Pomaceutridae of the Philippines, bureau of science	500	158	6 x 9½
Ang Magsasakang Filipino, Vol. 1, No. 4, bureau of agriculture	5,000	8	9½ x 12
Annual Report, Part 4, 1924 (Scientific), weather bureau	500	48	9½ x 12
Philippine Journal of Science, Vol. 35, No. 1, bureau of science	1,300	152	7½ x 10½
Philippine Journal of Science, Vol. 35, No. 2, bureau of science	1,300	118	7½ x 10½
Ang Magsasakang Filipino, Vol. 2, No. 1, 1928, bureau of agriculture	5,000	8	9½ x 12
Seismological Bulletin, January to June, 1927, weather bureau	500	36	9½ x 12
Reprint Philippine Agricultural Review, Vol. 20, No. 4, fourth quarter, 1927, bureau of agriculture	300	118	7½ x 10½
Astronomical and Meteorological Condition of the Eclipse of the Sun, May 9, 1929, in the Philippines, weather bureau	800	24	9½ x 12
The Evaporation at Manila, weather bureau	1,000	16	9½ x 12
Radio Lectures on Agricultural Topics, III, bureau of agriculture	1,000	76	6 x 9½
Circular No. 160, El Chincke del Arroz (Spanish), bureau of agriculture	1,000	8	6 x 9½
The Philippine Journal of Science, Vol. 35, No. 3, bureau of science	1,300	204	7½ x 10½
Reprinting Philippine Agricultural Review, Vol. 20, No. 3, third quarter, 1927, bureau of agriculture	300	170	7½ x 10½
The Intensity of Rainfall at Manila, weather bureau	1,000	28	9½ x 12
The Sunshine at Manila, weather bureau	1,000	24	9½ x 12
The Philippine Journal of Science, Vol. 35, No. 4, April, 1928, bureau of science	1,300	196	7½ x 10½
Seismological Bulletin, July to December, 1927, weather bureau	500	32	9½ x 12
Five-Place Logarithmic Tables, bureau of lands	500	84	7½ x 10½
The Philippine Journal of Science, Vol. 36, No. 1, bureau of science	1,300	168	7½ x 10½
Philippine Agricultural Review, Vol. 21, No. 1, first quarter, 1928, bureau of agriculture	1,200	100	7½ x 10½
The Philippine Journal of Science, Vol. 36, No. 2, bureau of science	1,300	162	7½ x 10½
Ang Magsasakang Filipino, Vol. II, No. 2, bureau of agriculture	5,000	8	9½ x 12
The Philippine Journal of Science, Vol. 36, No. 3, bureau of science	1,300	156	7½ x 10½
Annual Report Scientific of the Weather Bureau, Part III, 1921	700	368	9½ x 12
Philippine Agricultural Review, Vol. 21, No. 2, second quarter, 1928, bureau of agriculture	1,200	128	7½ x 10½
Circular No. 148, The Duck Industry in the Philippines (English), bureau of agriculture	2,000	22	6 x 9½
Summary of the Philippine Marine Mollusks, bureau of science	500	384	6 x 9½
Bulletin No. 42, The Rubber Industry in the Middle East (English), bureau of agriculture	1,200	142	6 x 9½
Monthly Bulletin, January to April, 1927, weather bureau	1,000	120	9½ x 12
Twenty-seventh Annual Report for the Fiscal Year Ended Dec. 31, 1927, bureau of agriculture	1,200	170	7½ x 10½
Monthly Bulletin, May to August, 1927, weather bureau	1,000	128	9½ x 12
Circular No. 96, Notas Sobre la Cria de Cerdos en Filipinas (Spanish), bureau of agriculture	2,000	68	6 x 9½
The Intensity of Rainfall in the Main Cities in the Philippines, weather bureau	800	20	9½ x 12
Annual Report, Part IV, 1925 (Scientific), weather bureau	500	48	9½ x 12
The Philippine Journal of Science, Vol. 36, No. 4, bureau of science	1,300	136	7½ x 10½
Bulletin No. 38, Mindanao and the Sulu Archipelago, Their National Resources and Opportunities for Development, bureau of agriculture	550	176	6 x 9½
Distribution of Life in the Philippines, bureau of science	700	380	6 x 9½
Ang Magsasakang Filipino, Vol. II, No. 3, September, 1928, bureau of agriculture	4,200	8	9½ x 12
The Philippine Journal of Science, Vol. 37, No. 1, bureau of science	1,300	148	7½ x 10½
The Philippine Agricultural Review, Vol. XXI, No. 3, third quarter, 1928, bureau of agriculture	1,200	248	7½ x 10½
The Philippine Journal of Science, Vol. 37, No. 2, bureau of science	1,300	90	7½ x 10½
Table of Contents, Philippine Agricultural Review, Vol. XX, 1927, bureau of agriculture	500	8	7½ x 10½
The Philippine Agricultural Review, Index to Vol. XX, 1927, bureau of agriculture	500	8	7½ x 10½
Reprint from the Philippine Journal of Science, Vol. 37, No. 2, bureau of science	105	90	7½ x 10½
Circular No. 8, Horse Breeding in the Philippines, bureau of agriculture	2,000	22	7 x 10½
Annual Report of the Director of Lands for 1927, bureau of lands	1,000	192	6 x 9½
DEPARTMENT OF COMMERCE AND COMMUNICATIONS			
Compensation Law, Act 3428 (English), bureau of labor	1,000	20	6 x 9½
Commerce and Industry Journal, Vol. 4, No. 2, February, 1928, bureau of commerce and industry	2,000	16	8¾ x 12
Compensation Act No. 3428 (Tagalog), bureau of labor	5,000	48	5¼ x 8

Title	Quantity	Number of pages	Size of page
DEPARTMENT OF COMMERCE AND COMMUNICATIONS—continued			
Commerce and Industry Journal, Vol. 4, No. 3, March, 1928, bureau of commerce and industry	2,000	24	<i>Inches</i> 8½ x 12
Commerce and Industry, Folder; Miss Philippines is Calling You, bureau of commerce and industry	20,000	12	8¼ x 9½
Amendment to the Manual of the Postal and Telegraph Service, bureau of posts	1,500	60	6 x 9½
Bureau of Commerce and Industry Journal, Vol. 4, No. 4, April, 1928	2,000	20	9¼ x 12½
Commerce and Industry Journal, Vol. 4, No. 5, May, 1928, bureau of commerce and industry	2,000	16	9½ x 12½
Rules for the Proper Application of Act. No. 3428 (English and Spanish), bureau of labor	5,000	140	6 x 9½
List of Lights, Buoys, Beacons, and Day Marks, bureau of commerce and industry	800	80	8½ x 11
Commerce and Industry Journal, Vol. 4, No. 6, June, 1928, bureau of commerce and industry	2,000	16	9¼ x 12½
Act No. 3428, Workman's Compensation Law (Spanish), bureau of labor	1,000	20	6 x 9½
Notice to Mariners No. 2, June 30, 1928, bureau of coast and geodetic survey	800	12	6 x 9½
Commerce and Industry Journal, Vol. IV, No. 7, July, 1928, bureau of commerce and industry	2,000	16	9¼ x 12½
Second National Thrift Campaign, bureau of posts	5,000	16	6 x 9½
Public Works Bulletin, Vol. 16, No. 1, 1928, bureau of public works	2,500	54	9½ x 12
Commerce and Industry Journal, Vol. 4, No. 9, September, 1928, bureau of commerce and industry	2,000	20	9¼ x 12½
Triangulation of the Philippine Islands, Vol. II, bureau of coast and geodetic survey	1,000	526	6 x 9½
Commerce and Industry Statistical Bulletin No. 10, 1928, bureau of commerce and industry	2,500	246	6 x 9½
Commerce and Industry Journal, Vol. IV, No. 10, October, 1928, bureau of commerce and industry	2,000	20	9¼ x 12½
Commerce and Industry Journal, Vol. IV, No. 11, November, 1928, bureau of commerce and industry	2,000	20	9¼ x 12½
Ang Kapangyarihan ng Salapi sa Kabuhayan nang Tao, bureau of posts	5,000	76	4½ x 6½
PHILIPPINE LEGISLATURE			
Journal of the Philippine Legislature, Nos. 1 to 68, Vol. III, July to November, 1928			
House of representatives:			
Divisorio Entre los Provincias de Tarlac y Nueva Ecija, Speech of Hon. L. Palarea	100	24	6 x 9½
Speech on Plebiscite of Rep. Ricardo Nepomuceno	100	12	6 x 9½
Diario de Sesiones, Vol. 17, Fifth Philippine Legislature	1,000	1,072	9½ x 12
Ley de Accidentes del Trabajo, Discurso del Hon. Ramon Torres	100	32	6 x 9½
Speech of Hon. Mariano Marcos	100	16	6 x 9½
Speech of Hon. Jose E. Locsin	300	40	6 x 9½
Speech of Hon. Juan L. Luna	100	16	6 x 9½
Speech of Hon. E. Montilla	100	24	6 x 9½
Speech of Hon. P. Vera	100	20	6 x 9½
Speech of Hon. P. Tecson on Belo Bill	100	20	6 x 9½
Speech of Hon. Pedro Gil on Belo Bill	500	16	6 x 9½
Speech of Hon. Benito Soliven	500	48	6 x 9½
Speech of Hon. Luis Santiago	100	12	6 x 9½
Speech of Hon. Jose G. Sanvictores	100	12	6 x 9½
Reglamento de la Camara de Representantes (Spanish)	500	88	4 x 6
Speech of Hon. Carlos P. Garcia	100	32	6 x 9½
Speech of Hon. Fabian R. Millar	100	20	6 x 9½
Speech of Hon. Bernardo Torres, The Private Schools of the Philippine Islands	100	40	6 x 9½
Speech of Hon. Serafin Marabut	100	24	6 x 9½
Speech of Hon. Mariano R. Marcos	100	24	6 x 9½
Speech of Jorge B. Delgado	100	20	6 x 9½
Speech of Hon. Jose C. Locsin	300	20	6 x 9½
Informe of Hon. Eugenio Perez	500	44	6 x 9½
Speech of Hon. Serafin Marabut	200	36	6 x 9½
Speech of Hon. Eugenio Perez	500	36	6 x 9½
Appropriation Law for 1929 (English)	3,036	284	6 x 9½
Philippine senate:			
Actas del Senado de Filipinas XI, Septima Legislatura Filipina, Segundo Periodo Ordinario de Sesiones	1,000	484	9½ x 12
S. No. 167, Act No. —, Corporation Law Reform (English)	100	20	6 x 9½
S. No. 167, Act No. —, Corporation Law Reform (Spanish)	100	24	6 x 9½
Acts Nos. 3431 to 3517 (6,072 copies English and Spanish of each act)	522,192		6 x 9½

Title	Quantity	Number of pages	Size of page
PRIVATE FIRMS AND INDIVIDUALS			
Rev. M. Selga, Manila Observatory, Vol. I, No. 4.....	800	16	<i>Inches</i> 9½ x 12
Manila Observatory, Vol. I, No. 2, Rev. Miguel Selga.....	800	28	9½ x 12
Announcement 1928-29, Philippine Women's College.....	2,600	24	9½ x 12
Handbook Classification of Plant and Maintenance, Panay Telephone & Telegraph Co.....	200	56	6 x 9½
Publication of Manila Observatory, Vol. I, No. 5, The Introduction of the Gregorian Calendar in the Philippines, Rev. Miguel Selga.....	800	16	9½ x 12
Annual Report of the General Manager for the Year Ended Dec. 31, 1927, Manila Railroad Co.....	1,000	82	8 x 10¾
Proceeding of the First National Congress on Tuberculosis, the Philippine Islands Antituberculosis Society.....	3,000	656	7½ x 1½

The printing and binding work during the year, including the publications listed above, was executed under 16,008 work orders, of which 9,018, amounting to ₱793,753.58, were for the insular government; 5,007, amounting to ₱361,059.22, for the provincial governments, including the city of Gaguio; 1,093, amounting to ₱47,160.11, for the city of Manila; and for private parties, 890, amounting to ₱30,601.49.

The following list shows the money value of the printing and binding work ordered by each bureau and government office, city of Manila, Provinces, United States Army and Navy, and private firms and individuals:

Name of customer	Cost of work executed	
	1927	1928
Governor General:		
Bureau of audits.....	₱13,029.50	₱12,018.21
Board of accountancy.....	258.14	32.45
General purpose fund.....	1.90	-----
Bureau of civil service.....	2,563.25	2,911.43
Executive appropriation.....	19,075.09	16,650.53
Total.....	34,927.88	31,612.62
Department of the interior:		
Bureau of nonchristian tribes.....	309.78	622.94
Philippine General Hospital.....	7,177.71	11,335.15
Southern Island Hospital.....	-----	44.50
Philippine Constabulary.....	15,643.04	15,855.06
Executive bureau.....	1,214.25	2,384.06
Board of examiners.....	1,387.03	1,695.55
Philippine board of examiners for the civil engineer.....	4.80	6.45
Board of pharmaceutical examiners and inspectors, Official Gazette.....	-----	4.84
Office of the public welfare commission.....	4,098.25	11,908.11
Metropolitan water district.....	3,138.32	3,462.45
Total.....	32,973.18	47,319.11
Department of public instruction:		
Bureau of education.....	92,920.16	92,298.04
Philippine health service.....	38,926.53	34,883.09
Bureau of quarantine service.....	501.38	522.55
University of the Philippines.....	18,294.90	10,130.16
College of Agriculture.....	1,016.49	1,102.09
College of Engineering.....	186.25	80.00
College of Liberal Arts.....	638.55	109.90
College of Fine Arts.....	-----	17.70
School of Dentistry.....	78.90	-----
College of Law.....	746.00	613.35
College of Medicine.....	445.75	1,133.25
College of Veterinary Science.....	189.85	10.40
School of Sanitation and Public Health, University of the Philippines.....	713.00	51.70
College of Conservatory of Music.....	57.60	94.60
Junior College, University of the Philippines, Cebu.....	249.45	345.31
College of Education.....	385.30	544.30
Library, University of the Philippines.....	2,052.25	811.35
Forest School, University of the Philippines.....	35.45	50.80
Department of military science.....	-----	72.45
Philippine School of Arts and Trades.....	-----	5.50
Total.....	157,437.81	142,876.54

Name of customer	Cost of work executed	
	1927	1928
Department of finance:		
Bureau of customs	P17,010.01	P17,593.41
Bureau of internal revenue	72,742.65	65,612.31
Treasury bureau	4,547.36	4,488.26
Bureau of printing	7,674.07	9,324.42
Bureau of printing sales stock:		
Stock forms	251,641.06	392,518.71
Gaceta Oficial	7,894.25	8,710.00
Executive bureau	5,455.05	13,338.15
Official Gazette	8,116.03	8,773.22
Judiciary	26,076.45	14,835.45
Miscellaneous	89.05	2,703.85
Forestry sales stock	695.10	
Textbooks board	13.00	
Total	401,954.08	537,897.78
Department of justice:		
Bureau of justice	27,321.23	25,159.48
Board of public service commissioners	2,393.28	5,261.44
Inferior courts	4,694.95	9,247.35
Philippine Library and Museum	1,163.99	2,154.01
Bureau of prisons	2,596.74	4,572.98
Supreme court, clerk	1,772.95	1,666.68
General land registration	21,500.61	20,708.62
Gaceta Oficial land notices	15,274.98	12,868.06
Official Gazette land notices	12,293.00	15,998.30
Segregation	41.42	31.20
Total	89,053.15	97,668.12
Department of agriculture and natural resources	30.40	40.19
Official Gazette		4.57
Bureau of agriculture	19,816.47	18,500.89
Rice colonization and plantation fund, Act 2818	15.64	
Stock herds and farms	1.60	26.60
Bureau of forestry	12,942.19	9,176.74
Bureau of lands	38,027.35	37,238.89
Bureau of science	45,885.92	37,575.20
Weather bureau	18,772.47	22,077.47
Total	135,492.04	124,640.55
Department of commerce and communications:		
Bureau of public works	23,824.53	34,341.41
Bureau of posts	117,979.57	134,752.10
Bureau of supply	6,846.28	8,392.17
Division of cold storage	3,359.22	6,289.97
Bureau of labor	3,067.28	4,569.49
Bureau of coast and geodetic survey	4,264.39	4,712.90
Bureau of commerce and industry	17,373.14	13,564.98
Total	176,714.41	206,623.02
City of Manila:		
Municipal board	4,269.77	5,065.97
Department of city schools	941.34	1,002.56
The city treasurer	12,984.20	19,537.99
Official Gazette		1.40
Department of engineering and public works	4,546.48	4,829.00
Fire department	933.63	785.30
Department of law:		
City fiscal	803.10	783.65
Court of first instance	3,519.30	2,969.04
Notices in the Official Gazette, English and Spanish	149.10	306.00
Municipal court	1,583.32	1,405.65
Sheriff of Manila	403.95	428.50
Department of police	1,968.13	2,273.07
Department of finance	4,810.77	6,349.56
Board of tax appeals	22.35	
Office of the national physical director	85.10	
Office of the physician	70.45	25.36
Office of the mayor	5,802.51	526.62
District auditor's office	208.28	198.80
Department of public recreation	27.64	14.03
Department of assessment	227.45	581.43
City sanatorium	94.60	76.18
Total	43,451.47	47,160.11

Name of customer	Cost of work executed	
	1927	1928
Philippine Legislature:		
House of representatives.....	P46,842.81	P45,441.26
Philippine senate.....	13,739.58	9,878.38
Total.....	60,582.39	55,319.64
Provinces:		
Abra.....	2,493.83	2,791.64
Agusan.....	1,937.49	2,463.85
Provincial hospital.....	83.81	-----
Albay.....	5,933.93	12,750.21
Provincial hospital.....	-----	258.34
Antique.....	2,779.27	5,181.83
Bataan.....	2,540.58	2,648.82
Batanes.....	493.25	1,215.12
Batangas.....	9,950.78	9,201.77
Provincial hospital.....	-----	108.62
Bohol.....	8,780.63	10,453.93
Bukidnon.....	865.74	1,325.18
Bulacan.....	7,631.48	9,813.73
Cagayan.....	4,120.16	5,133.38
Capiz.....	8,378.19	7,535.69
Cotabato.....	2,206.01	2,711.82
Provincial hospital.....	83.57	8.00
Cavite.....	4,361.15	6,578.30
Cebu.....	17,373.86	20,644.46
Camarines Sur.....	5,984.96	9,647.17
Provincial hospital.....	83.57	-----
Camarines Norte.....	1,765.02	2,338.86
Davao.....	2,986.82	5,098.48
Provincial hospital.....	83.81	-----
Ilocos Norte.....	6,266.84	7,316.19
Ilocos Sur.....	6,307.16	7,859.30
Provincial hospital.....	83.52	34.00
Iloilo.....	18,032.27	22,321.30
Isabela.....	2,674.22	4,109.10
Laguna.....	11,177.62	9,637.85
Provincial hospital.....	141.93	150.03
Lanao.....	1,934.13	3,069.86
Provincial hospital.....	83.81	-----
Leyte.....	14,403.46	19,554.30
Provincial hospital.....	99.17	71.63
Masbate.....	2,461.10	2,769.31
Mindoro.....	3,842.29	3,130.89
Misamis.....	8,116.83	10,094.24
Mountain.....	3,430.45	4,639.52
Provincial hospital.....	259.82	62.00
Marinduque.....	2,117.85	2,417.80
Negros Occidental.....	14,225.74	12,768.13
Provincial hospital.....	88.64	30.99
Negros Oriental.....	7,797.87	6,003.86
Nueva Ecija.....	8,939.03	9,116.83
Nueva Vizcaya.....	2,214.57	2,679.87
Provincial hospital.....	83.93	58.25
Pampanga.....	4,982.78	9,397.94
Pangasinan.....	13,664.51	21,460.53
Provincial hospital.....	261.04	331.77
Palawan.....	1,157.54	2,135.73
Provincial hospital.....	83.40	-----
Rizal.....	7,150.48	13,072.09
Romblon.....	3,009.08	2,562.89
Samar.....	7,244.20	9,226.81
Sorsogon.....	4,208.48	5,939.27
Surigao.....	4,590.97	4,131.13
Sulu.....	2,239.76	2,376.36
Provincial hospital.....	83.81	-----
Tarlac.....	4,941.54	7,731.71
Provincial hospital.....	229.48	264.30
Tayabas.....	8,766.70	16,617.61
Provincial hospital.....	237.27	191.94
Union.....	5,223.70	6,578.71
Zambales.....	2,743.30	4,866.03
Zamboanga.....	4,548.86	6,879.86
Provincial hospital.....	83.45	-----
City of Baguio.....	1,909.68	1,490.09
Total.....	283,060.24	361,059.22
Outside work order:		
Department of the United States Army and Navy.....	6.00	-----
Private firms and individuals.....	34,696.97	30,601.49
Total.....	34,702.97	30,601.49
Grand total.....	1,450,349.62	1,682,778.20

TRAINING OF APPRENTICES

At the beginning of the fiscal year there were 12 apprentices under instruction. Inasmuch as the number is not believed sufficient to cover the needs of the service due to retirements and resignations of competent craftsmen, this bureau has employed another 10 new apprentices during the year, making thereby a total of 22, the number of apprentices under instruction at present in the bureau.

PERSONNEL

There were 503 employees on the rolls of the bureau of printing on December 31, 1928, as compared with 490 employees on December 31, 1927. The increase was due mainly to the appointment of new apprentices. This bureau has no native employee of the non-Christian tribes detailed in the special Provinces.

During the year there had been 32 employees dropped from the rolls of this bureau. Of this number 11 died, 9 voluntarily resigned, 4 retired, 1 transferred, and 7 dropped for desertion of posts.

FISCAL OPERATION

The product of the bureau of printing for the fiscal year 1928, as during the previous year, was charged at the same uniform scale of prices, the total amounting to ₱1,349,444.33. During that period the cost of operation was ₱955,237.97, making a profit of ₱394,206.36.

The following is a comparative statement of itemized income and expense of operation of this bureau between the fiscal years 1927 and 1928:

INCOME

	Jan. 1 to Dec. 31, 1927	Jan. 1 to Dec. 31, 1928
Printing and binding services:		
Insular government.....	₱776,717.79	₱790,772.93
Provincial and municipal governments.....	284,703.74	361,059.22
City of Manila.....	43,404.32	47,160.11
Other government offices.....	3,138.32	2,930.65
U. S. Army and Navy.....	6.00	-----
Private firms and individuals.....	34,696.97	30,601.49
Subtotal.....	1,143,667.14	1,232,574.40
Sales of supplies:		
Documents.....	23,394.31	29,674.45
Official Gazette.....	14,479.50	14,318.80
Gaceta Oficial.....	16,399.60	14,864.85
Miscellaneous.....	1,886.00	5,124.66
Subtotal.....	56,159.41	63,982.76
Total sales of supplies and services.....	1,198,826.55	1,296,557.16
Deduct cost of goods sold.....	300,519.50	390,247.32
Gross profit on sales.....	898,307.05	906,309.84
Incidental receipts.....	2,333.05	2,255.11
Production account.....	302,337.52	440,879.38
Fabricated equipment.....	49.64	-----
Gross income.....	1,203,027.26	1,349,444.33

EXPENSE

Salaries of officers and employees.....	₱60,163.62	₱58,543.76
Wages of laborers and apprentices.....	437,719.92	444,641.85
Traveling expenses of personnel.....	2,032.80	2,499.94
Freight, express, and delivery service.....	4,694.97	6,051.07
Postal, telephone, telegraph, and cable service.....	3,313.99	4,953.70
Illumination and power service.....	553.68	869.44
Other services.....	3,436.18	3,315.00
Consumption of supplies and materials.....	381,630.63	389,075.30
Free distribution of documents.....	7,662.15	5,311.35
Maintenance of equipment.....	1,478.22	1,641.03
Depreciation of equipment.....	33,054.37	38,677.88
Deterioration of supplies and sales stock.....	1,772.38	257.65
Extraordinary losses.....	70.16	-----
Gross expense.....	937,643.07	955,237.97
Gross profit.....	265,384.19	394,206.36
Less loss on account of revaluation of printing paper.....	2,465.96	-----
Net profit.....	262,918.23	394,206.36

Record of deliveries.—The extent of the work of the delivery section is shown by the following table, the corresponding figures for the fiscal years 1913, 1919, and 1927 being also given :

Method of transportation	Number of packages	Pounds	Method of transportation	Number of packages	Pounds
By autotrucks (Manila):			By freight:		
1913.....	35, 423	586, 953	1913.....	2, 563	365, 943
1919.....	38, 430	815, 364	1919.....	3, 084	402, 670
1927.....	44, 427	953, 411	1927.....	3, 567	501, 776
1928.....	48, 370	937, 982	1928.....	4, 435	625, 931
By mail (including periodicals):			Total:		
1913.....	134, 012	51, 063	1913.....	171, 998	1, 003, 959
1919.....	127, 792	32, 892	1919.....	169, 306	1, 250, 926
1927.....	407, 566	61, 680	1927.....	455, 560	1, 516, 867
1928.....	427, 181	65, 405	1928.....	479, 986	1, 629, 318

Consumption of materials.—The cost of printing paper (including envelopes, shipping tags, bristol board, cardboard, and tagboard) and all other supplies required for operation and which entered into the product during the year was ₱389,075.30. Included in the consumption of materials for the year are printing inks of various colors, and cloth and leather of different kinds for binding purposes, the quantity and cost of which are as follows:

	Quantity	Cost
Printing inks.....pounds..	4, 602	₱4, 221. 73
Cloth for binding.....yards..	15, 075	9, 967. 36
Leather for binding.....skins..	1, 243	7, 193. 21

The following is a comparative statement of the quantity of paper consumed during the fiscal years 1903, 1913, 1919, 1927, and 1928:

Year	Book, writing, bond and ledger paper		Bristol board and cardboard		Envelopes, number
	Ream	Pound	Sheet	Pound	
1903.....	7, 201	347, 164	48, 530	15, 803	192, 000
1913.....	16, 512	850, 048	240, 592	53, 660	5, 101, 461
1919.....	24, 884	1, 146, 071	406, 267	89, 386	6, 190, 242
1927.....	22, 880	1, 043, 906	342, 624	102, 750	12, 625, 472
1928.....	26, 909	1, 149, 360	422, 424	125, 554	8, 751, 397

¹ Includes 5,000,000 envelopes with 2-centavo postage stamp.

Quantity of books and pamphlets printed and bound.—There have been printed during the year 874,324 pads, 8,604,829 pamphlets, having over 16 pages, and 46,753 blank books. A total of 23,703 library books of various sizes ordered for binding only were received.

Appropriation Act No. 3355.—The appropriation Act No. 3355 for the fiscal year 1928 provided the bureau of printing with the amount of ₱1,156,553. An additional appropriation in the amount of ₱7,700 was granted this bureau during the year to cover overtime work, freight, express, and delivery service, and postal, telephone, telegraph, and cable service needed in the printing and delivery through mail of election forms and official and sample ballots used in the general elections which took place on June 5, 1928.

Receipts and expenditures.—The following comparative statement shows the income, cost of operation including depreciation of machinery and other equipment, and net profits of the bureau during the fiscal years 1903, 1913, 1919, 1927, and 1928, together with the per capita of each year's receipts and expenditures:

Year	Receipts	Expenses	Profits	Per capita upon—	
				Receipts	Expenditures
1903.....	P443,920.20	P395,446.92	P48,473.28	0.0581	0.0517
1913.....	906,002.78	823,104.31	82,898.47	.0973	.0862
1919.....	1,223,884.96	1,177,007.81	46,877.15	.1159	.1115
1927.....	1,203,027.26	937,643.07	265,384.19	.0964	.0751
1928.....	1,349,444.33	955,237.97	394,206.36	.1060	.0750

Status of fiscal affairs.—The following table shows in detail the status of the fiscal affairs of the bureau at the beginning and end of the fiscal year 1928. Included in the current assets and kept for sale by the bureau of printing are Official Gazettes and public documents the selling prices of which amounted to ₱310,841.88 on December 31, 1928:

	Status Dec. 31, 1927	Status Dec. 31, 1928	Increase	Decrease
Fixed assets:				
Land.....	P129,612.00	P129,612.00		
Buildings.....	329,572.82	329,572.82		
Machinery and other equipment.....	894,259.73	917,097.39	P22,837.66	
Accrued depreciation.....	(666,047.42)	(689,585.60)	(23,538.18)	
Capital account.....	687,397.13	686,696.61	(700.52)	
Current assets:				
Printing paper.....	229,066.03	220,616.55		₱8,449.48
Other materials.....	157,306.34	149,034.14		8,272.20
Work in process.....	32,124.73	23,029.98		9,094.75
Sales stock.....	254,162.97	300,651.76	46,488.79	
Prepayment.....	33.51	280.97	247.46	
Accounts receivable.....	231,301.59	253,054.99	21,753.40	
Cash in insular treasury.....	(800,145.41)	(867,383.07)	(67,237.66)	
Cash in hands of officers.....	327.07	604.44	277.37	
Total.....	104,176.83	79,889.76	1,529.36	25,816.43
Total of all assets.....	791,573.96	766,586.37	828.84	25,816.43
Liabilities:				
Fixed capital.....	687,397.13	686,696.61		700.52
Current liabilities:				
Accrued leave.....	37,638.55	41,989.98	4,351.43	
Extra compensation.....	28,044.00	27,843.80		200.20
All other.....	38,494.28	10,055.98		28,438.30
Total liabilities.....	791,573.96	766,586.37	4,351.43	29,339.02
Reversion of receipts.....	1,211,990.01	1,346,255.58	134,265.57	

Documents and supplies.—Public documents and publications and miscellaneous supplies to the value of ₱63,982.76 were sold during the year.

There was a debit balance for the Official Gazettes (English) of ₱7,187.10; documents, ₱168,667.98. There was a credit balance for the Gaceta Oficial (Spanish) of ₱49,175.50. On December 31, 1928, there 1,196 paid and 136 free subscribers to the Official Gazette and 1,210 paid and 62 free subscribers to the Gaceta Oficial.

Stock forms.—For the purpose of economy and for the convenience of requisitioners, this bureau, in accordance with section 1647 of the administrative code, keeps in its sales stock printed copies of various official and accountable forms regularly used by the insular, provincial, and municipal governments. There were printed during the year and delivered into stock, blank forms computed at ₱400,317.65. During the same period issues from stock amounted to ₱339,900.40.

Census reports.—The prompt disposal of 26,795 volumes on hand of the census report of 1918 as recommended in previous annual reports of this bureau by free distribution is reiterated. The data published therein are becoming unuseful besides the fact that the books are being deteriorated and the space

occupied by them in the bodega is badly needed by this bureau to relieve the present congested conditions.

Outstanding obligations.—The outstanding obligations on December 31, 1928, amounted to ₱258,520.37 and are divided as follows:

Contingent: Requisitions for printing paper, equipment, and supplies (estimated) -----	₱185,134.85
Accounts payable:	
Accrued leave earned-----	₱41,989.98
Extra compensation (bonus) earned-----	27,843.80
Unpaid wages-----	411.50
Return transportation (Act No. 80)-----	300.00
Freight on printing and binding shipments-----	2,024.87
All other -----	815.37
Total accounts payable-----	73,385.52
Total liabilities-----	258,520.37

Respectfully submitted.

MIGUEL UNSON,
Secretary of Finance.

His Excellency the GOVERNOR GENERAL,
Malacañang Palace, Manila.

ANNUAL REPORT OF THE SECRETARY OF JUSTICE

MANILA, March 23, 1929.

SIR: Pursuant to the provisions of section 91 of the Administrative Code, I have the honor to submit the following report covering the activities of the department of justice during the year ending December 31, 1928.

OFFICE OF THE DEPARTMENT OF JUSTICE

Personnel.—Mr. Luis P. Torres, undersecretary of justice, has been acting secretary of justice until the 31st of August, 1928. The undersigned having been appointed secretary of justice, took the oath of office and assumed the duties of his position on September 1, 1928.

Bills submitted.—Out of 11 bills submitted by the department of justice to the legislature for enactment during the regular session held last year, only 2 were passed by the said body. Said bills are: Act No. 3433, an act creating 10 additional positions of auxiliary judges of first instance and the necessary subordinate personnel, fixing their respective duties and salaries, and for other purposes, and Act No. 3434, an act to provide for the necessary travel and subsistence expenses for witnesses known to be indigents, in criminal cases, under certain conditions.

By the enactment of now Act No. 3433 the 10 new judges provided therein will be assigned by the department of justice to the disposition of the many land cases which, on account of the lack of judiciary personnel, could not be disposed of as quickly as desired. Although a certain number of judges has been constantly assigned to land work yet the pressure and volume of business of the various courts of first instance, particularly in some Provinces, arrested the attention of the courts. From now on the 10 new judges, together with the other judges who have heretofore been assigned to the disposition of land cases, cadastral or otherwise, will be able to devote all their attention to such work.

As regards Act No. 3434, this measure embodies the long-felt need in the administration of justice in these islands, for, as stated in one of the recommendations made in the annual report of the department of justice for the year 1927, "many cases have been thrown out of court because of the inability of the state to introduce or to bring to the stand important witnesses who could not defray their own traveling and subsistence expenses on account of their financial condition. It is believed that under certain conditions such anomaly could be remedied and thus make the administration of justice more effective in this particular instance. A bill embodying the above recommendation has been submitted by the department of justice to the legislature during the last session but no action was taken thereon."

The other bills submitted by the department of justice to the legislature are:

1. "An act defining the jurisdiction of the Supreme Court of the Philippine Islands, creating a court of appeals and defining its jurisdiction, and for other purposes." This bill, which was introduced as senate bill No. 56, was passed by the senate on November 8, 1928, but for lack of time was not favorably acted upon by the lower house.

2. "An act concerning the judiciary; making provisions regarding the court of appeals, created by act entitled 'An act defining the jurisdiction of the Supreme Court of the Philippine Islands, creating a court of appeals and defining its jurisdiction, and for other purposes'; providing appropriation for said court of appeals; applying provisions of certain sections of the Revised Administrative Code to said court of appeals, and for other purposes." This bill was introduced as senate bill No. 155 and was approved by the upper chamber on November 8, 1928, but for lack of time was not considered by the lower house.

3. "An act to provide that the functions of sheriffs be exercised ex officio by the clerks of courts of first instance throughout the islands and to amend sections 183, 184, 186, 187, 188, 189, and 191 of the Administrative Code of the Philippine Islands, and appropriating the necessary amount for the salaries of provincial sheriffs and deputies." This measure was introduced as house bill No. 1118 and was favorably acted upon by the lower house on October 16, 1928, but was not considered by the senate.

In connection with the above-mentioned bill it is remembered that one of the recommendations made in the annual report of the department of justice for the year 1927 reads as follows: "The above is one of the much-needed reforms in the administration of justice in these islands, and a resolution to this effect was approved by the convention of judges held in the city of Baguio in April, 1926. For several consecutive sessions the legislature has been urged to pass a bill prepared by the department of justice containing provisions to that effect because it is thought that if said bill be enacted into a law, it would serve to expedite the administration of justice."

4. "An act amending section 3 of Act No. 2941, as amended." This bill was drafted by the department of justice as a substitute to senate bill No. 69 for the purpose of standardizing the salaries of judges of first instance. No action was taken thereon by the legislature.

5. "An act amending section 2073 of Act No. 2711, known as the Administrative Code." This bill was introduced as house bill No. 616. Both the attorney general and the department of justice have urged the passage of this measure, the purpose of which is to place the provincial fiscals and deputy provincial fiscals under the direct control of the attorney general, for under the present legislation the provincial fiscals secure permission for leave of absence from the chief of the executive bureau with the advice of the attorney general.

6. "An act amending section 33 of General Order No. 58, otherwise known as Code of Criminal Procedure." In the annual report of the department of justice for the year 1927, the following recommendation was made:

"That section 33 of the Code of Criminal Procedure be amended so as to make it discretionary—not mandatory, as is now provided therein—with the trial court to grant or not to grant a separate trial in those criminal cases where two or more defendants are jointly charged with the same offense.

"The experience of over a quarter of a century since G. O. No. 58 had been put in force is a witness to the fact that this right granted by law has been abused a great deal with a view to obstructing the administration of justice. In many cases where it could not even be alleged that the interest of each of the accused is in conflict with that of the other codefendants in the same criminal case, a separate trial had to be granted by the trial court with the result that one very simple criminal case had to be tried as many times as there were defendants charged with the same crime. In the opinion of the undersigned, the granting of a separate trial should be discretionary with the trial court, whenever the court believes that the defense of one of the accused will be in conflict with the interest of the other defendants in the same case."

7. "An act to provide for the renewal of the certificates of public convenience issued by the public service commission, and for other purposes." It is the purpose of this bill to authorize the public service commission to charge annual fees for the issuance of certificates of public convenience, such certificates being of the nature of mere licenses subject to annual fees or taxes. Under the present law fees are collected only once, although the certificates issued to public-service companies are good for an indefinite period of time.

8. "An act to amend section 13 of Act 2590, commonly known as 'An act for the protection of game and fish.'"

Revision of the Penal Code.—Under the same heading a statement is contained on page 3 of the annual report of the department of justice for 1927 on the action taken by this office creating by Administrative Order No. 94, a committee of prominent officials and members of the bar, versed in criminal law, for the purpose of making a thorough revision of the Penal Code and adapting the same to the present conditions in these islands. Said committee submitted the product of its labors to the department of justice, and the undersigned is carefully considering the draft of the Revised Penal Code so prepared for the purpose of submitting the same to the legislature.

Considering the importance of the rules and principles of the canons of judicial ethics adopted by the American Bar Association for the American judiciary, the department of justice has reproduced them for the benefit of

the judges of first instance and the justices of the peace in Circular No. 10, issued in English and Spanish on July 13, 1928. Said circular was subsequently published in the Official Gazette.

By Circular No. 9 dated June 13, 1928, or a few days after the last general elections for elective offices in the Philippine Islands, this department issued a circular letter to all judges and auxiliary judges of first instance inviting their attention to the provisions of section 481 of the Administrative Code, as amended, by section 27 of Act No. 3210 and Act No. 3387 and requesting said judges that all election contests be disposed of and decided as soon as possible or within the period of three months from the time the contests have been filed with the clerk of court, unless for some unavoidable reasons, which should be explained, a case could not be disposed of within the period stated. Moreover, by individual communications sent by this office to judges of first instance in whose courts those election cases have been pending last year, said judges were required to report on the status of such cases, or to explain the reasons for the delay in their disposition before the expiration of the year 1928; and it is most gratifying for the undersigned to state that the efforts exerted by this office in this direction have not been in vain, for out of a total of 195 election contests for provincial or municipal offices growing out of the last general elections held in June of last year, 176 cases have been disposed of with final judgments in each case. At the close of the year 1928 there remained pending adjudication only 19 cases, of which 3 are contests for the offices of provincial governors of Ilocos Norte, Antique, and Cavite, respectively, while the other 16 cases are election contests for municipal offices in different provinces of the archipelago.

In this connection it should be stated that the election contests for the offices of provincial governors of Ilocos Norte and Antique, respectively, had been decided by the respective courts of first instance, but they were appealed to the supreme court of these islands. With respect to the contest for the office of the provincial governor of Cavite, the delay in its disposal is due to the fact that the court of first instance of Cavite could not proceed with the hearing of the case because a number of ballot boxes pertaining to several municipalities of Cavite are in the possession of the supreme court in connection with the contests for the municipal offices of said municipalities, appealed to and pending disposition by the higher court.

ADMINISTRATION OF JUSTICE

SUPREME COURT

Personnel.—During the year covered by this report there have been no changes in the judiciary personnel of the supreme court.

Business transacted.—During the year there were filed 1,999 cases (civil and criminal), which added to 880 cases of all kinds pending at the close of business on December 31, 1927, gave a total of 2,879 cases pending and filed during the period covered by this report. During the year 1928, 1,827 cases of all kinds were disposed of by the supreme court, as against 1,866 civil and criminal cases disposed of during the previous year. There were 1,029 civil and criminal cases pending submission at the close of business on December 31, 1928, besides the 21 civil and 2 criminal cases pending decision at the close of business for said year.

There were admitted to take the bar examinations 261 applicants. However, 8 of said applicants were absent in said examinations, and only 166 of those taking part therein successfully passed the test.

One hundred eighty-six notaries public were appointed by the supreme court, as against 168 receiving commissions as such during the preceding year.

Collections.—The office of the clerk of the supreme court collected fees, fines, and court costs and bar-examination fees amounting to ₱36,339.87, as against ₱41,848.53 collected during the previous year, or a decrease of ₱5,508.66.

During the year covered by this report, 37 complaints were received by the supreme court against certain practicing attorneys, 17 of which have already been disposed of; 12 are in the hands of the attorney general pending his investigation, report, and recommendation; 2 have been sent to the respective courts of first instance, likewise for investigation; 1 was forwarded to the city fiscal of Manila for appropriate action, and the other 5 have not yet been submitted to the supreme court for decision.

There were also three complaints received against one judge of first instance, two of which have already been disposed of, and the other one is now pending decision.

COURTS OF FIRST INSTANCE

Personnel.—On May 22, 1928, Judge Julio Llorente, of the eleventh district (Province of Rizal), was retired by operation of law. Judge Llorente rendered a long and efficient service in this capacity. During the military occupation he was a justice of the criminal branch of the supreme court until he was appointed provincial governor of Samar. Then he was returned to the judiciary, having filled the post of judge in several judicial districts in the island of Luzon. His retirement occurred while he was presiding over the eleventh judicial district.

Judge George R. Harvey, presiding over the third branch, ninth judicial district (city of Manila), was, on his request, granted retirement, effective June 13, 1928. Judge Harvey's services in the Philippine government commenced as early as 1902, when he was given an appointment as stenographer. Then he was appointed assistant attorney for the Philippine Constabulary, from which position he was transferred, in the same capacity, to the bureau of justice and subsequently promoted to the position of solicitor general. He was next appointed to preside over one of the judicial districts in southern Luzon and finally promoted to the last position he held before his retirement.

Judge Diego Gloria, presiding over the first branch of the fourteenth judicial district (Tayabas and Marinduque), having reached the statutory age, was also retired on November 10, 1928. Judge Gloria's services date back from the organization of the civil government by the Taft Philippine administration in the Province of Batangas, where he was made provincial fiscal. He was next promoted to first assistant prosecuting attorney of the city of Manila and then transferred as assistant attorney in the bureau of justice and finally promoted to the bench. As a judge he held court in many Provinces in the island of Luzon.

After a long illness Judge Fernando Salas, who was presiding over one of the branches of the twenty-third judicial district (Province of Iloilo), died on December 10, 1928. Before his appointment to the bench Judge Salas was a provincial fiscal. As judge he presided over the courts of several Provinces of these islands.

In addition to the above, another position of district judge of first instance was vacated when the resignation of Judge Francisco Dominguez of the tenth judicial district (Cavite and Palawan) was accepted by the Governor General effective February 28, 1928.

During the year 1928 the following promotions, transfers, and original appointments have taken place in the judiciary:

Auxiliary Judge of First Instance Manuel V. Moran, with station at San Fernando, Pampanga, was promoted to the position of judge of first instance of the tenth judicial district (Cavite and Palawan);

Auxiliary Judge of First Instance Conrado Carballo, with station at Cabanatuan, Nueva Ecija, was transferred to a similar position with station at Lingayen, Pangasinan;

Auxiliary Judge of First Instance Mariano Buyson, with station at San Pablo, Laguna, was transferred to the same position with station at Cabanatuan, Nueva Ecija;

Auxiliary Judge of First Instance Buenaventura Reyes, with station at Lingayen, Pangasinan, was transferred to the same position with a station at San Fernando, Pampanga;

Attorney Fernando Jugo, of the bureau of justice, was appointed auxiliary judge of first instance, with station at San Pablo, Laguna; and

Provincial Fiscal Sixto de la Costa of Batangas was promoted to auxiliary judge of first instance, with station at Tagbilaran, Bohol.

The above changes were made on February 6, 1928.

Business transacted.—At the beginning of the year 1928, there were pending in the courts of first instance throughout the islands 21,232 civil and criminal cases, and there were filed 23,226 civil and criminal cases. These two figures make a total of 44,458 civil and criminal cases filed and pending during 1928. On the other hand, during the same period the courts of first instance disposed of 23,091 cases of all kinds. After deducting this number from the total of cases pending and filed (44,458), there remain a total of 21,367 civil and crim-

inal cases pending in all the courts of first instance of these islands at the close of the year 1928.

For a comparison of the activities of the courts of first instance during the year 1928 with those of the year 1927, the following table is given:

Year	Pending at the beginning of the year	Filed during the year	Disposed of during the year	Pending at the end of the year
1928.....	21, 232	23, 226	23, 091	21, 367
1927.....	23, 327	22, 559	23, 929	21, 957
Difference.....	¹ 2, 095	² 667	¹ 838	¹ 590

¹ Decrease.

² Increase.

As may be seen from the above figures, although the number of cases filed during the year 1928 exceeded the number of those filed during 1927 by 667, the number of those pending at the end of the year was 590 cases less than the corresponding figure for the year 1927. Apparently, the courts could have disposed of a greater number of cases during the year 1928, yet it must be taken into consideration that the courts of first instance were quite busy in the disposition of election matters, not only with those arising during the pre-election period, but also with those that needed the attention of the court as the result of the general elections held in June of last year. According to the past experience of this office for similar years, the election cases have a decided effect on the routine work of the courts of first instance. Election cases, particularly those contesting provincial offices, take too much of the time of the judges and the courts.

Furthermore, it should be stated in this connection that during the year, four positions of district judges remained vacant, three by the retirement of Judges Llorente, Harvey, and Gloria, and one on account of the death of Judge Salas. These vacancies, of course, exercised some influence in the total number of cases disposed of during the year, for had not said positions become vacant, the four judges could undoubtedly have been able to dispose of a considerable number of cases of all kinds, and thus contributed to increase the total number of cases disposed of during the year. Such vacancies having occurred, as stated, temporary arrangements had to be made in order to remedy the situation. However, considering all the circumstances, it is very gratifying to note that at the end of the year 1928, the number of cases pending was much less than the corresponding figure for 1927.

By administrative order No. 23, and pursuant to the provisions of section 172 of the revised administrative code, 24 judges of first instance were not only assigned to duty during the vacation period of the court but were likewise authorized and instructed to hold special terms of courts in their respective places of assignments for the purpose of carrying on the work of the courts of first instance in the city of Manila and in the Provinces; and in view of the holding of the general elections held last year, as necessity and circumstances demanded, other judges besides those listed in said administrative order No. 23, were instructed to hold courts at such places as the interest of the administration of justice required.

Receipts and expenditures.—The sum of ₱360,746.12 was the total collection of the courts of first instance during the year 1928, which is ₱22,257.03 more than the receipts registered during the fiscal year 1927. Said increase may be attributed to the enactment of Act No. 3395, amending section 788 of the code of civil procedure regarding a new schedule of fees to be collected by the clerks of courts, which act took effect on January 1, 1928. The expenses for salaries and wages and other miscellaneous expenses amounted to ₱1,955,449 as against ₱1,898,376 for 1927, representing an increase of ₱57,000 which may be attributed to the creation of several positions of court stenographers and other subordinate personnel for some offices of the clerks of courts in the Provinces.

JUSTICES OF THE PEACE

Personnel.—There were 113 new justices and auxiliary justices of the peace and ex officio justices of the peace appointed during the year 1928, as compared

with a total of 185 appointments made during 1927. During the same period, 16 justices, 2 of whom were auxiliary justices of the peace were removed from office for cause, 4 were compelled to resign, and the other 4 were temporarily suspended from office.

Business transacted.—A supplementary report covering the business transacted by the justices of the peace courts during the year 1928 will be submitted to His Excellency, the Governor General, as soon as complete data are received from all the justices of the peace.

BUREAU OF JUSTICE

Personnel.—During the year 1928, and as a result of the promotion to the bench of Mr. Fernando Jugo, the ranking assistant attorney in the bureau of justice, assistant attorneys Emilio Peña, Salvador Abad Santos, Antonio E. Cuyugan, Felix Bautista Angelo, and Arsenio Paez were each advanced in position with corresponding increase of salary.

Special assignments.—During the period covered by this report, several assistant attorneys were detached from their regular work in the bureau to perform special duties in the Provinces. Attorney Braulio Bejasa was detailed in the Province of Cagayan in connection with an arson case in Aparri. He was also detailed to the Province of Rizal to represent the collector of internal revenue in the hearing of a civil case in which the said official was the defendant, and subsequently detailed to the Province of Laguna to investigate certain charges against a former sheriff of the Province. Attorney Sabino Padilla was detailed in the Province of Laguna in connection with the prosecution of one Pedro Gutierrez for the crime of murder, and with reference to an investigation of a certain practicing attorney for malpractice. He was also designated to act as member of the customs survey board. Attorney Cesar Bengson was sent to Cavite to make further inquiry in connection with an alleged unjustified nonprosecution of Leonard Johnson for homicide, and also to Baguio, Mountain Province, in connection with mandamus proceedings against the insular auditor. Attorney Catalino Buenaventura made an ocular inspection of the land to be expropriated by the Metropolitan Water District, and represented the government in the court of first instance of Rizal, in the hearing of cadastral case No. 674. He also represented the government in the court of first instance of Nueva Ecija, in civil case No. 4288, and he further went to Bulacan in connection with the case of the Metropolitan Water District *v.* Hacienda Caretas (Inc.). Finally, he was ordered to Pangasinan to represent the secretary of agriculture and natural resources in the hearing of two civil cases. Attorney Arsenio Paez was detailed to the Province of Capiz to investigate and prosecute violators of the election law, and then detailed to the Province of Abra for a similar purpose.

Business transacted.—As legal adviser of the insular government and its officers, the attorney general rendered during the year 230 written opinions to several government officials and entities, including the Governor General, the heads of the executive departments, chiefs of bureaus, the University of the Philippine Islands, the commanding general of the Philippine department and several provincial fiscals. Although no record has been kept thereof, the attorney general has also rendered verbal opinions to the Governor General, various department secretaries and other officers of the government. The bureau of justice has also dispatched 92,807 official communications and has issued 18 circulars and circular letters. The solicitor general, as the representative of the attorney general, has attended all meetings of the postal savings bank board. The bureau of justice has passed upon the legal sufficiency of five contracts for loans involving an aggregate sum of ₱330,500 from the pension and investment board and has performed similar duty in connection with one contract from the postal savings bank board involving an amount of ₱56,000, besides preparing for said institution a contract involving the sum of ₱19,662.

The bureau of justice has handled for different branches of the government 91 ordinary civil cases, of which 62 pertained to the bureau of internal revenue and 24 belonged to the bureau of customs. The great majority of those cases were tried in the court of first instance of Manila, while six of them were heard in the municipal court of this city. There were nine cases of foreclosure of mortgage handled by the representatives of the bureau of justice in the courts of first instance during the year 1928 for the postal savings bank, teachers' pension and investment board, and bureau of lands involving different

sums aggregating a total of ₱246,950.44, including principal and interest up to the filing of the respective complaints. During the same period 2,348 land and cadastral cases were handled by the bureau of justice. Likewise, the attorney general's office intervened in 83 petitions for naturalization, of which 58 were granted, 2 denied, 15 were pending hearing, 6 were pending decision by the courts of first instance, and 1 was pending in the supreme court.

During the year 1928 the bureau of justice handled 51 cases of extraordinary legal remedies, including those still pending at the close of the previous year 1927. Of these 51 cases there were 7 mandamus, 4 injunction, 2 prohibition, 7 quo warranto, 3 certiorari, 21 habeas corpus, and the remaining 7 were proceedings under section 513 of the code of civil procedure. Of the above 51 cases the attorney general represented the government as petitioner in 12 cases and as respondent in the remaining 39 cases.

During the year 601 printed briefs, 263 arguments, and 1,195 motions were filed in the supreme court. Of the 601 briefs 547 were filed in appealed criminal cases and the remaining 54 cases were filed in civil cases handled by the bureau of justice for different bureaus and offices of the government.

During the same period two investigations were conducted against provincial fiscals, and, as a consequence thereof, one provincial fiscal was removed from office, for cause, while the other case is still pending action. There were 34 cases for malpractice handled by the bureau of justice against practicing attorneys and four investigations conducted against candidates for admission to the bar.

The bureau of justice also intervened, on behalf of certain government offices and the public in several cases pending before the public service commission. Two of said cases (*Bureau of Posts v. Balluag Electric Co.*, and the *Municipal Council of Iloilo v. Panay Electric Co. (Inc.)*) were started in 1926 but were disposed of on March 27 and April 18 of the year 1928, respectively. A new case entitled "*The City of Manila v. The Public Service Commission*" is now pending in the supreme court.

The bureau of justice handled also five extradition cases, some of which could not be successfully accomplished due to lack of available government funds to cover the expenses incident to the extradition of the fugitives from justice. It may not be amiss to state also that the city fiscal, in connection with the cases which have arisen from the bar scandals, drafted, with the approval of this office, a bill now known as senate bill No. 113, amending section 15 of the code of criminal procedure so as to authorize the court to carry on the trial of a criminal case even without the presence of the accused, except in cases involving capital punishments or when the accused is in jail.

Various collection cases were handled for different bureaus, offices, and branches of the government involving an aggregate amount of ₱143,604.75. The bureau of justice examined during the year 43 bail bonds, recommending 38 of them for approval which involved an aggregate amount of ₱257,600 for the temporary release of 40 accused who have appealed their cases to the supreme court. Finally, the bureau of justice intervened in 62 sales at public auction, including some which were reported pending execution during the year 1927, and as a result thereof the bureau of justice obtained adjudication of properties to the government of the Philippine Islands in the aggregate value of ₱44,162.08. Properties to the value of ₱1,386.50 were sold to private parties.

Inspection.—During the month of April of last year the attorney general, in company with the secretary of the interior, and the acting secretary of justice, inspected the court offices and the offices of the provincial fiscals of the Provinces of northern Luzon, including Nueva Ecija, Nueva Vizcaya, Isabela, Cagayan, Ilocos Norte, Ilocos Sur, Abra, La Union, and Mountain Provinces. Later on the attorney general went on inspection to the Provinces of Cebut, Zamboanga, Davao, Sulu, Oriental Negros, Iloilo, Occidental Negros, and Antique. In general, the offices visited were found in a satisfactory condition.

Receipts and expenditures.—The income of the bureau of justice during the year 1928 amounted to ₱3,202.50, which is a little less than that of 1927, while the expenses amounted to ₱210,499.66, which is ₱5,751.34 less than the corresponding amount for 1927. The big decrease was largely due to the reduction of the payment for the shortage found in the account of the late Chief Clerk Mauricio Almazan, as custodian of the funds and properties of the deceased American citizens and for the purchase of national reporter system.

Administration of estates of deceased Americans.—During the year the attorney general administered the estates of 163 deceased American citizens, 67 of which are new cases received during 1928. The estates of 71 deceased Ameri-

cans were closed during that period, and 92 were in the process of settlement at the end of the fiscal year 1928.

The following is a statement of funds of intestate estates of Americans who died in these islands:

DEBIT

Balance, Dec. 31, 1927-----	₱25, 670. 04
Receipts during the fiscal year 1928-----	28, 812. 71
Total-----	54, 482. 75

CREDIT

Disbursements during the year 1928:

Payment to the heirs and claims against the estates of deceased Americans-----	₱29, 683. 80
Service income of the attorney general-----	1, 090. 54
Inheritance tax collected-----	237. 73
Income tax collected-----	105. 50
	₱31, 117. 57
Balance as of Dec. 31, 1928-----	23, 365. 18
Total-----	54, 482. 75

GENERAL LAND REGISTRATION OFFICE

Personnel.—During the year 1928 three registers of deeds were appointed, namely, Jose Azcarraga for Zamboanga, Benedicto Bringas for Nueva Ecija, and Jose V. Muña for Bohol. While the last two were given appointments as registers of deeds on account of their qualifications as practicing attorneys, Mr. Jose Azcarraga, who was appointed register of deeds for Zamboanga, was promoted to that position in consideration of his efficient and long service as chief clerk of the office of the register of deeds of that Province.

Business transacted.—During the year covered by this report there were issued by the general office 32,460 decrees, as against 76,743 issued during the preceding year. Of the figure above given, 2,374 decrees were issued in ordinary land cases and 30,086 in cadastral cases, as against 1,661 and 75,082 decrees, respectively, issued during the preceding year. This shows that while the number of decrees issued in cadastral cases has decreased, those issued in ordinary land cases have increased.

The decrease in the total number of decrees issued is mainly due to the four vacancies in the judiciary. Besides, the courts of first instance have been quite busy on election matters during the year 1928, not only during the pre-election period but also after the elections, for many contests were filed in many Provinces. According to the election law and the specific instructions of the department of justice to the judges, those cases had to be disposed of within the shortest time possible. Moreover, the decrees affecting a considerable number of lots could not be issued because of some errors found in the adjudication as regards the civil status, age, and other circumstances of the claimants.

During the last fiscal year 2,006 notices involving 64,121 parties were published in the Official Gazette, as against 1,852 involving 68,315 parties in the year 1927. In accordance with the law, 1,924 certifications of the publication of said notices in the Official Gazette and of the service of same to interested parties were prepared by the general office as against 1,871 made in 1927. Last year 167 cadastral cases and 2,322 ordinary land cases, making a total of 2,489 cases, were examined for publication. There were also examined during that period for the issuance of the corresponding decrees a total of 2,161 cases as compared with 1,734 cases examined during the preceding year. This work required the submission to the courts of 2,963 reports as against 3,205 submitted in the preceding year.

The lines of 3,665 lots of 3,220 plans filed in 1,904 cases were computed as against 3,296 lots of 2,722 plans in 1,556 cases in the previous year. In connection with the examination of cases for the issuance of decrees, the general office also prepared 304 municipal-index plans, as a result of the plotting thereon of 3,542 plans in 2,512 cases embracing 5,515 lots with 71,836 corners. Mostly at the request of private concerns and upon payment of the corresponding fees, the general office made 2,668 blue-print copies of plans as against

3,321 copies made in the preceding year. Pursuant to the decisions rendered in some cadastral cases, 394 orders, as against 263 in the preceding year, were issued by the general office to registers of deeds for the cancellation of old certificates of titles and the issuance of new titles in lieu thereof so as to have the land described conform to the cadastral plans.

The general office prepared and forwarded during the year 1928 to the various registers of deeds 35,400 original certificates of titles with their corresponding owners' duplicates as against 75,503 in the preceding year. As may be seen, the number of certificates of titles prepared does not agree with the number of decrees issued during the period covered by this report, but this is easily explained by the fact that in the year 1927 a big number of decrees issued were pending in the typewriting section of the general office at the close of that year, which were disposed of at the beginning of the year 1928.

Ordinary land cases.—There were disposed of by the courts of first instance during the year 1928, 1,953 ordinary land cases as against 1,794 in the preceding year. In 1,795 of these cases the applications were granted, with 11 denials and 147 dismissals.

During the year 1928 there were 41 ordinary land cases appealed to the supreme court. This tribunal disposed of a total of 15 ordinary cases during the same period, affirming the decisions of the lower courts in 7 ordinary cases and reversing the judgment in 1, while the appeal of the remaining other 7 cases were dismissed by abandonment of the parties or otherwise.

The following table shows the total number of ordinary land registration cases disposed of by the courts up to December 31, 1928:

Status on Dec. 31, 1928	Number of applications			
	Granted	Denied	Dis-missed	Total
Final disposition.....	1,676	2	130	1,808
Decided, but subject to appeal.....	98	5	9	112
On appeal to supreme court.....	21	4	8	33
Total cases decided by the lower court during the year.....	1,795	11	147	1,953
Previously decided, but subject to appeal.....	5	1	1	7
Previous appeals pending.....	37	22	14	73
Prior final disposition made.....	26,367	524	1,722	28,613
Total business transacted.....	28,204	558	1,884	30,646
Pending on the docket.....				2,518
Total cases filed up to Dec. 31, 1928.....				33,164

Cadastral cases.—As regards cadastral cases there were filed during the year 1928, 85 cases comprising 46,971 lots, as against 83 cases with 37,165 lots in the preceding year. There is now a total of 1,025 cadastral cases involving 640,488 lots.

The following shows the status of lots on December 31, 1928, included in cadastral cases which have been instituted since the organization of the courts of first instance and the establishment of the general land registration office in the year 1914:

Status:	Number of lots
Pending in the courts of first instance on Jan. 1, 1928.....	221,714
Comprised in cases instituted during 1928.....	46,971
Decided by the courts during the said period.....	18,930
Pending on Dec. 31, 1928.....	249,755

The foregoing does not include cadastral cases in the city of Manila for they are already closed and the lots are particularly decreed.

Manila cadastral and land cases.—During the past year, three applications for ordinary registration of land within the city of Manila and none under the cadastral law were received. But those terminated, of which 3,232 were ordinary cases, and 78 involving over 12,647 lots were cadastral cases, brought 539 motions and petitions of varied nature, as against 493 filed in the previous year.

In accordance with section 200 of the administrative code, the judge of the fourth branch of the court of first instance of Manila gave his advice to the register of deeds of Manila in 56 requests for advice or "consultas."

Registration of deeds.—The following table shows the work accomplished by registers of deeds during the year 1928, as compared with the work accomplished in 1927:

Work accomplished	1927	1928
Certificates of titles issued:		
Pursuant to decrees.....	56, 148	50, 687
Pursuant to patents.....	1, 241	1, 206
Pursuant to deeds of transfer.....	11, 509	14, 346
Instruments recorded under Act 496:		
Deeds of sale.....	9, 185	10, 792
Deeds of mortgage.....	5, 642	6, 294
Other instruments.....	10, 906	12, 180
Instruments recorded under the Spanish mortgage law:		
Deeds of sale.....	406	443
Deeds of mortgage.....	59	54
Other instruments.....	292	118
Instruments recorded under Act 2837:		
Deeds of sale.....	7, 375	8, 955
Deeds of mortgage.....	1, 020	1, 375
Other instruments.....	1, 831	2, 486
Number of instruments recorded under the chattle mortgage law.....	13, 353	9, 678
Number of professional certificates recorded.....	208	74
Number of certificates of apportionment of water according to priority recorded.....	180	145
Number of certificates of water rights recorded.....	12	8

Income and expenditure.—The receipts of the general land registration office in the year 1928 amounted to ₱518,400.76, against ₱483,296.84 in the previous year, or an increase of ₱35,103.92. Of the total collections, ₱452,514.93 were paid to the offices of the registers of deeds, ₱47,802.40 to the clerks of courts, and ₱18,083.43 to the central office, the figures for the previous year being ₱416,367.56, ₱41,697.03, and ₱25,232.25, respectively.

The total expenditure of the general land registration office during the year 1928 amounted to ₱473,504.63, as against ₱465,465.77 spent during the preceding year. The increase in expenditure is, however, more than offset by the increase in income.

The following table giving the income and expenditure of the general land registration office during the last five years will show that this branch of the government has lived for three consecutive years within its own resources:

Fiscal years	Income	Expenditure	Profit
1924.....	₱198, 160. 24	₱287, 931. 62	¹ ₱89, 771. 38
1925.....	348, 160. 08	395, 170. 85	¹ 47, 010. 77
1926.....	434, 292. 97	416, 572. 30	17, 765. 67
1927.....	483, 296. 84	465, 465. 77	17, 831. 07
1928.....	518, 400. 76	473, 504. 63	44, 896. 13

¹ Loss.

Legislation approved.—In addition to Act No. 3433, creating 10 additional positions of auxiliary judges of first instance and the necessary subordinate personnel, fixing their respective duties and salaries, and for other purposes, passed and enacted last year and which has been discussed elsewhere in this report, the legislature, by Act No. 3439, further amended section 127 of the land registration act (No. 496), as amended by Act No. 3362. According to this amendment each page of the copy of the deed to be recorded in the office of the register of deeds, or if such copy is not to be recorded, that to be kept by the notary public, should be signed by the parties and their witnesses on the left margin, and sealed with the notarial seal. Moreover, Act No. 3465, recently passed amends subsection (a) of section 18 of Act No. 2259 regarding the collection of cadastral costs.

PUBLIC SERVICE COMMISSION

Organization and personnel.—The efforts of the department of justice in securing for the public-service commission better quarters for its offices did not materialize until the first week of March, 1928, when, after necessary repairs made on a portion of the premises formerly occupied by the Philippine library in Intramuros, the offices of the commission were transferred thereto. It is not necessary to state here the benefits derived from the said transfer by the public-service commission and the persons dealing with the same, not to mention the advantage gained by the commission in being located nearer to the courts and other offices of the government.

No important changes in the personnel of the commission have taken place during the year 1928, with the exception of the death of Mr. Lorenzo R. Yadao, deputy secretary of the commission.

Business transacted.—The number of cases handled by the commission during the year 1928 amounted to 4,265, which is the largest in the history of the commission in a single year since its foundation, or an increase of 1,320 cases over the previous year. This increase is generally due to the disposition of many applications of garages throughout the islands, for as stated in the 1927 report, by virtue of Act No. 3316 the commission had already assumed control over the operation of garage cars. The control was formerly exercised by the bureau of public works. The cases handled and tried by the commission during the year 1928 are classified as follows: 1,834 certificates of public convenience, 133 rate cases, 157 sales and transfers of business or parts thereof, 45 cases affecting time schedules, 481 applications for special permits, 384 cases of substitution of equipment, 329 cases of increase of equipment or capacity, 84 cases of extension of line or service, 57 cases of conversion of irregular service into a regular one, 9 approvals of mortgage and other contracts, 19 orders to show cause of various kinds, and 693 complaints of various kinds against public-service companies, and 40 miscellaneous petitions. The total number of public-utility services coming under the supervision of the commission on December 31, 1928, is 3,428, distributed as follows: 3,169 automobiles, autotricks, and auto jitneys; 101 electric plants; 8 ferries; 1 gas plant; 61 ice plants; 4 railroads; 1 radio system; 1 street railway; 42 telephone systems; 11 waterwork systems; and 29 wharves. This number of utilities does not include steamers, due to the fact that they no longer fall under the jurisdiction of the commission with the exception of the fixing of their maximum passenger and freight rates.

The following is a comparative statement of the number of cases handled since 1914, the year of the organization of the former board of the public-utility commission.

1914-----	164	1922-----	488
1915-----	550	1923-----	1,144
1916-----	116	1924-----	1,862
1917-----	141	1925-----	2,493
1918-----	299	1926-----	2,482
1919-----	428	1927-----	2,945
1920-----	415	1928-----	4,265
1921-----	518		

Rate cases.—The question of the fixing of rates is one of the most difficult problems confronting the commission annually. During the year 1928, many public services have petitioned the commission for authority to reduce their rates. This is particularly noticeable among operators of autotricks and automobiles. The general rate for autotricks during the year 1927 was ₱0.02½ per kilometer per passenger, but during the year covered by this report this was further reduced to ₱0.02. In some cases, however, applications for reduction down to ₱0.01½ or even ₱0.01¼ per kilometer per passenger have been submitted by big companies during the later part of the year when the Manila Railroad Co. applied for a wholesale reduction of its rates in the majority of its lines. In case No. 17361 the Manila Railroad Co., in order to meet the competition of autotricks, was forced to ask for a big reduction of its rates which took effect on October 15, 1928.

Another question confronting the commission is the adoption of uniform rates for PU automobiles, and on March 24, 1928, the commission adopted the following automobile rates:

	Per hour
For PU automobiles of 7 or more passengers-----	₱4.50
Minimum charge-----	1.00
For PU automobiles of less than 7 passengers-----	3.50
Minimum charge-----	1.00

The adoption of uniform rates for garages and autotrucks is still under consideration.

Improvements in public service.—Due to the policy adopted by the commission of encouraging operators of autotrucks to change their schedule from irregular to a regular service, there has been marked improvement in the operation of public services throughout the islands. By virtue of the provisions of this regulation, no substitution nor increase of equipment can be secured by irregular operators until they have converted their schedule into a regular one. It may be stated also that the great improvement in the operation of electric plants is noticeable, due to the decision arrived at by the Manila Electric Co. to engage in this line of business. Another contributing factor in the improvement of the operation of public services under the commission is the cooperation given by the district engineers and the automobile division of the bureau of public works, upon the request of the public service commission, in not renewing TPU or PU license plates of operators, without having first examined the working of the engine of such public services, autotrucks, or automobiles.

Legislation.—With the indorsement of the department of justice, the commission, as far back as the year 1923, has been urging the passage of a bill, namely, one providing for the annual payment of certificate fees by public services under the jurisdiction of said commission. Up to the present time no favorable action has been secured for the passage of said measure. The commission has been requested to comment on numerous bills—most of them franchises bills—introduced in the senate and house of representatives.

Income and expenditure.—The appropriation of the public service commission for the year 1928 was ₱123,519.20 while the total income for the same year was ₱118,376.25, from which it will be seen that the net cost of the operation and maintenance of the commission is only ₱5,142.95.

BUREAU OF PRISONS

Personnel.—The bureau of prisons lost the valuable and efficient services of Mr. Lorenzo Enriquez, chief clerk and executive inspector in the central office, who died on July 11, 1928. The position thus vacant was filled by the promotion of Mr. Generoso Castañeda, assistant chief clerk. As a result of said promotion other changes were made in the subordinate personnel.

Mr. Ramon P. Mitra, superintendent of the Iwahig penal colony, on recommendation of this office was designated by his excellency, the Governor General, as the official delegate of the Philippine government to the Fifty-eighth Congress of the American Prison Association which was held in Kansas City, Mo., from October 5 to 11, 1928. Mr. Mitra was, on December 31, 1928, still absent on his special mission to the United States.

It is also to be noted that Dr. Santiago U. Estrada, chief of the prison sanitation division, was given one of the scholarships of the department of justice for the year 1928 to specialize in the United States on thoracic surgery and thoracic diseases for prison service.

Prison population.—In the annual report of the department of justice for the year 1927, it was stated that at the close of said year there had been an increase of 877 insular and provincial prisoners in confinement over the number recorded during the preceding year. On December 31, 1928, the total number of insular and provincial prisoners recorded was 8,510, or an increase of 406 prisoners over the count made at the close of the preceding year, which was 8,104. This increase is due mainly to the great number of prisoners received and comparatively small number of prisoners released during the year. On December 31, 1928, the prison population of the Philippine Islands was distributed as follows:

Bilibid prison-----	3,804
San Ramon prison and penal farm-----	943
Members of trustees' families-----	(116)

Iwahig penal colony	1,686
Members of colonists' families	(217)
Working in Corregidor	608
Philippine Constabulary stations	101
San Lazaro Insane Asylum	38
Police stations, Manila	60
Insular prisoners working in provincial jails	3
Confined in provincial jails	1,267
Total	8,510

There were 6,743 prisoners confined in insular prisons on December 31, 1927, while on December 31, 1928, the number was increased to 7,243, the excess amounting to 500 over that of the preceding year. As regards the provincial prisoners, the number of those in confinement on December 31, 1928, was 1,267, or 94 prisoners less than the count made on December 31, 1927.

The following table is a comparative statement showing the number of prisoners in confinement in insular and provincial prisons on December 31 of the past six years:

	1923	1924	1925	1926	1927	1928
Bilibid prison	2,078	2,474	2,740	2,774	3,210	3,804
Iwahig penal colony	1,314	1,538	1,360	1,553	1,716	1,686
San Ramon prison and penal farm	699	628	707	807	978	943
Fort Mills stockade, Corregidor	573	458	526	592	600	608
Police stations, Manila	51	52	57	60	59	60
Philippine Constabulary stations	69	77	79	87	91	101
San Lazaro insane asylum	26	28	28	32	34	38
Insular prisoners working in provincial jails				26	55	3
Confined in provincial jails	1,343	1,237	1,236	1,296	1,361	1,267
Total	6,319	6,593	6,733	7,227	8,104	8,510

Inasmuch as Bilibid prison is the main penal institution of the country and the receiving station for practically all newly convicted prisoners and distributing center for their assignments, it recorded the largest number of changes in its population. The average registered during the year being about 29.89, passing one way or the other through its gates daily, or 2.74 less than that of the preceding year.

The number of commitments received during the year 1928 was 4,546 for Bilibid prison, and 289 for San Ramon penal farm, as against 5,047 and 311, respectively, for the year 1927.

During the period covered by this report, there have been recorded only five cases of violation of conditional pardon granted in previous years.

The crimes causing the greatest number of commitments have been theft, homicide, robbery, physical injuries, embezzlement, and adultery, and the following table will show the number of prisoners committed to Bilibid prison and San Ramon penal farm during the past five years for each of the above-mentioned crimes:

Crime	1924		1925		1926		1927		1928	
	Bilibid	San Ramon	Bilibid	San Ramon	Bilibid	San Ramon	Bilibid	San Ramon	Bilibid	San Ramon
Theft	783	26	630	24	696	34	764	83	691	60
Homicide	285	16	229	29	252	43	293	24	275	46
Robbery	209	40	232	66	307	61	256	114	240	79
Physical injuries	186	3	213	7	127	7	245	7	231	12
Embezzlement	486	8	301	5	151	9	228	1	170	1
Adultery	146	3	119	1	147	4	159	1	118	3

The following is a comparative statement showing the number of habitual criminals for the past five years under the offenses specified:

Offenses	1924	1925	1926	1927	1928
(a) Total felonies.....	243	159	253	511	586
(b) Murder.....	5	5	2	6	9
(c) Robbery.....	21	25	48	125	128
(d) Larceny.....	184	108	159	322	363
(e) Sexual crimes.....	---	2	8	3	13
(f) Other felonies.....	33	19	36	55	73
(g) Misdemeanors.....	244	185	122	71	92
(h) Violation of city ordinance.....	395	314	440	762	890

A comparison of the crimes against person with those against property shows that more persons were convicted of crimes against property than those against persons.

Visitors.—Bilibid prison continues to be one of the institutions in Manila most frequented by visitors, as evidenced by the fact that during the year 1928 about 26,000 people visited the prison. It is also worth mentioning that 20,601 people attended the daily calisthenic exercises of prisoners during the year and approximately 488 persons came to visit the different departments, shops, and other buildings within the reservation. During the year about 786 tourists visited the institution. In this connection, it is stated that the visitors' registry is a witness to the good impression obtained by visitors of the penitentiary, who noted down their remarks on what they found in the prison during their visit.

Discipline and order.—(a) *Bilibid prison.*—Notwithstanding the congested condition of the central prison as stated above, it can be safely asserted that the conduct observed by the prisoners, in general, during the period covered by this report was excellent, with the exception of only one case of serious nature, that of an Igorot prisoner who, while working in the wicker furniture department, stabbed a prison employee and two other prisoners, and were it not for the timely assistance rendered by some trusty prisoners who disarmed the aggressor it would have resulted in the killing of his victim. The Igorot prisoner was prosecuted, convicted, and sentenced for serious physical injuries. During the year two prisoners committed suicide.

No prisoner escaped from the prison compound, but 10 prisoners escaped while working in the different parts of the city under the surveillance of special guards appointed by the authorities of the city of Manila. Nine of the escaped prisoners have been recaptured and the other one is still at large.

(b) *Iwahig penal colony.*—The standard of discipline in the Iwahig penal colony during the year was excellent. There was no escape nor attempt to escape during that period, and it is gratifying to note that during the last nine years 1928 was the second year when there was no attempt on the part of the colonists to escape from the colony reservation. Nine prisoners were returned to Bilibid prison for bad conduct.

(c) *San Ramon prison and penal farm.*—The discipline during the year in San Ramon prison and penal farm was very satisfactory. For the first time in the history of the penitentiary since 1912, the year 1928 is noted for the fact that there was but one prisoner who escaped, a Christian sentenced by the court of Davao to 2 years, 4 months, and 1 day for robbery, and had only 9 months to serve when he escaped.

Executions.—During the year covered by this report, 9 prisoners sentenced to capital punishment were executed by electrocution, pursuant to the provisions of Act No. 3104. At the end of the year there were in confinement in Bilibid prison 10 persons sentenced to death whose cases were appealed to the supreme court.

Health and sanitation.—(a) *Bilibid prison.*—Notwithstanding the difficulties encountered in the enforcement of sanitary regulations due to the overpopulation of the central prison, generally speaking, the sanitary conditions in Bilibid prison during the year were satisfactory. There were recorded 128 cases of death among prisoners, not including the 9 prisoners executed and the 2 who committed suicide. Of the 128 cases of death, 44 were due to tuberculosis, 37 to pneumonia, 10 to meningitis, and the rest to other diseases. The prev-

alence of diseases like pneumonia and tuberculosis in Bilibid prison may be traced to the congested condition of the central prison.

The total number of patients admitted to Bilibid Hospital during the period covered by this report is 3,922, of which 136 had to undergo major operations and 301 minor operations. Dental treatment was administered not only to prisoners confined in Bilibid prison, but also to those serving sentences in the penal colonies. There were 15,628 prescriptions filled by the prison pharmacy, and the laboratory recorded a total of 12,301 examinations of various kinds.

(b) *Iwahig penal colony.*—The campaign against malaria, which was begun in March, 1927, seems to give excellent results according to the report of the colony physician. There were only 885 cases of malaria, of which 162 were admitted and treated in the colony hospital and 723 in the dispensary clinics, which was considered satisfactory for a population of 2,442 transients and residents. There were recorded 43 deaths among the colonists, 15 of which were due to pulmonary tuberculosis.

(c) *San Ramon prison and penal farm.*—The sanitary condition within the penal reservation was exceptionally good, there being no outbreak of any communicable or infectious disease. During the year 1928 the number of persons admitted to the colony hospital was 124, excluding the new arrivals who, under the existing rules, had to undergo physical examinations. Only 15 cases of death were recorded during the year, 7 of which were due to pulmonary tuberculosis, 1 to the commission of suicide, and the rest to other diseases. The remarks made by Maj. A. Parker Hitchens, medical advisor to the Governor General that "the hospital is in excellent condition, clean, and orderly," will portray the sanitary conditions of the reservation.

Religious services.—As in previous years, religious services were held on Sundays and on days declared legal holidays at Bilibid prison and in the Iwahig penal colony, each of which has two chaplains—a Catholic priest and a priest of the Philippine Independent Church. Ministers of other religious denominations were allowed on convenient occasions to teach their religious doctrine among the prisoners. Books, periodicals, and pamphlets on religious matters were also distributed by the prison chaplains and the visiting missionaries who were making their regular visits to said institution.

In San Ramon prison and penal farm a Roman Catholic priest voluntarily and without compensation rendered religious services during the year for the Christian inmates of the colony, there being no appropriation for the payment of a prison chaplain. As to Mohammedan inmates, a Moro priest performed services for their benefit.

Recreations and entertainments.—In Bilibid prison the inmates were furnished with wholesome recreations and entertainments, consisting of athletic games, theatrical performances and literary-musical programs, especially during Christmas, Rizal Day, and New Year's celebrations. The Bilibid band played for the Radio Corporation of the Philippines every Sunday afternoon and Thursday evening without charge. In the Iwahig penal colony and San Ramon prison and penal farm, wholesome recreations and entertainments were likewise furnished the inmates during the year. Besides musical and literary entertainments, the prisoners were also allowed to devote part of their time to athletics.

IMPROVEMENTS AND REPAIRS

(a) *Bilibid prison.*—During the year 1928 some important improvements and repairs were made in Bilibid prison, the costs of which were estimated at ₱72,100, including overhead expenses at the rate of 10 per cent. These improvements include the reconstruction of a prisoners' dormitory estimated at ₱25,000, the conversion of the old culvert roofs of dormitories 8-ac and 8-bc into galvanized iron roofs with wooden trusses estimated at ₱9,000, the repair and drilling of an artesian well estimated at ₱10,000, the painting and roofing of the administration building, guards' quarters, the two hospitals, the sales department, the Bilibid mess, and general kitchen, all the prisoners' dormitories, the buildings in the different industrial departments estimated at ₱14,000, and the general repairs of the bakery and general kitchen and construction of a fireproof chimney in the women's kitchen estimated at ₱5,000.

(b) *Iwahig penal colony.*—Some very important improvements and repairs have also been carried out, comprising the clearing and adding to the rice paddies of 50 hectares of land, the clearing and planting with upland palay of 94 hectares of virgin forests, thus adding a total of 144 hectares to the land devoted to

agricultural pursuit, the reconditioning of about 240 hectares of pasture land, the construction of a camarin in the barrio Casuyan, the completion of a new dormitory in Mangahan, the construction of two large camarins at Banaag, the enlargement of the officers' quarters at Banaag station, the construction of concrete platform for the ice plant, the construction of a modern copra drier made of cement and old pipes at Quinina station with a capacity of 18,000 nuts, thoroughly dried in 15 hours. The completion of the Catholic church and convent with sewerage and light, the improvement of the waterworks system by the addition of larger pipes at the reservoir and rearrangement of the main pipes of distribution, the widening of all irrigation canals, the construction of modern and sanitary water-closets at some of the stations, and the clearing of 4 hectares of virgin forests at the foot of Baguio Hills for coffee and cacao plantations, were also accomplished during the year. The value of all the improvements made during the year was estimated at ₱61,353 as compared with ₱95,611.40 of the previous year.

(c) *San Ramon prison and penal farm.*—The value of improvements made during the year was estimated at ₱41,900 as compared with the sum of ₱44,400, the value of those made during the preceding year. These improvements include the completion of the executive building, valued at ₱10,000, the water system valued at ₱5,000, the completion of 8 houses for trustees with their families estimated at ₱4,000, the completion of New Course of Sax River to control flood estimated at ₱10,000, and others.

Prison schools.—In the central prison and San Ramon prison and penal farm, the prisoners were taught how to read and write. In the central prison day and night classes were conducted under the direct supervision of three civilian teachers assisted by about 90 prisoners who have passed a test to ascertain their ability to teach. Day classes were held from 7 to 9.30 a. m. and from 1.30 to 2.30 p. m., and night classes from 6 to 8 p. m.

Class attendance was made compulsory for the prisoners except for those who were over 50 years of age, or whose educational attainment was above that given in the prison curriculum. The subjects taught were language, arithmetic, reading, writing, conversational English, and spelling. During the year covered by this report, classes up to the sixth grade were conducted and special classes in Spanish and telegraphy were also held, although attendance thereto was optional. It is most gratifying to state that a majority of those who have been in confinement and who were formerly illiterate, can now read and write.

In San Raman prison and penal farm, night classes were also held. Although attendance thereto was not made compulsory in view of the nature of the work of the inmates, yet there were 680 prisoners attending the classes. The teaching staff was composed entirely of prisoners.

Provincial jails.—Due to the limited funds appropriated for the bureau of prisons, no inspection of provincial jails was made by the director of prisons during the year 1928, except in the Provinces of Cavite and Rizal. The administration of provincial jail of Cavite was found to be unsatisfactory. In November, 1928, the provincial jail of Rizal was inspected and some improvement was observed in the jail administration due to the interest shown in that direction by the newly elected governor of that Province. The first steps taken by him was to dismiss all inefficient jail guards and employees.

From the beginning of the year 1926 and after the holding of the first convention of provincial wardens in Manila, a notable improvement in provincial jail administration in many Provinces has been observed and this satisfactory state of affairs in some provincial prisons continued until the latter part of the year 1928. In view of the appointment of new men to the positions of provincial wardens in practically the majority of the Provinces of the Archipelago as a result of the elections of new provincial governors, who assumed their official duties on October 16, 1928, it was deemed expedient to call the provincial wardens to a second triennial convention which was held in Manila from December 10 to 15, 1928. Twenty-five delegates attended the convention and were given instructions on computation of prisoners' sentences, practical demonstrations in guarding, use and care of fire arms, including marksmanship test, preparing prison monthly reports, filling out prisoners' records, including identification, and other matters concerning jail administration. Lectures were also delivered by prominent government officials.

As in the previous year, the provincial commander of the Philippine Constabulary in each Province and the judges of first instance in different judicial districts rendered their report of inspections of the provincial jails. Through

these reports the director of prisons was kept informed of the existing conditions of the provincial jails.

Financial status.—Notwithstanding the considerable increase of about 500 prisoners in the population of the bureau of prisons, the expenditure for the year 1928 remained about the same as that of last year. The total amount spent by the bureau of prisons proper for the year 1928 was ₱962,410.46, as compared with ₱960,417.18 spent during the year 1927, or a slight increase of only ₱1,992.60. The average net cost to the government of the confinement of each prisoner was reduced considerably from ₱0.26 during 1927 to about ₱0.24 during the year 1928.

The original allotments of ₱9,000 for traveling expenses of personnel; ₱6,000 for freight, express, and delivery service; ₱578,000 for consumption of supplies and materials; and ₱18,000 for traveling expenses of persons and government employees, were not sufficient to meet all the expenditures in these items, and an additional allotment of ₱79,200 had to be granted under Act No. 3432. On the other hand, the sum of ₱37,464.54 was reverted to the insular treasury as surplus in excess of the requirements from other items at the end of the year.

The following table shows the yearly expenditure of the bureau of prisons during the last seven years:

Year	Prison division	Industrial division	Total	Year	Prison division	Industrial division	Total
1922----	₱938,317.72	₱316,098.05	₱1,254,415.77	1926----	₱882,984.94	₱202,353.66	₱1,085,338.60
1923----	792,799.89	207,484.76	1,000,284.65	1927----	960,417.86	216,633.29	1,177,051.15
1924----	842,425.99	225,887.15	1,068,313.14	1928----	962,410.46	226,882.04	1,189,292.50
1925----	891,531.37	239,169.25	1,130,700.62				

It will be noticed that notwithstanding the considerable increase in prison population during the last 3 years, the total yearly expenditure of the bureau of prisons during said years was much less than the total of the expenditure for the year 1922 when the population was smaller by over 2,000 prisoners.

The income of the bureau of prisons proper amounted to ₱347,574.45, which is ₱63,928.01 less than the income of the previous year. The rise of the revenue in 1927 may be traced to the favorable weather condition which contributed to the extraordinary increase of the crops harvested. The industrial division has collected ₱210,413.03, showing an increase of ₱18,452.81 over that of the previous year. The total income of the bureau of prisons proper and the industrial division during the year 1928 amounted to ₱557,987.48.

Maintenance of prisoners.—The total cost of maintenance of prisoners in Bilibid was ₱520,853.65, that of prisoners in Iwahig penal colony, ₱277,684.92; that of prisoners in San Ramon prison and penal farm, ₱156,443.03; and that of the prisoners in Fort Mills stockade, Corregidor, ₱36,899.95. The daily average cost of maintenance was about ₱0.36 for each prisoner in Bilibid; about ₱0.45 for each prisoner in Iwahig penal colony; about ₱0.47 for each prisoner in San Ramon prison and penal farm; and about ₱0.19 for each prisoner in Fort Mills stockade, Corregidor. The cost of maintenance includes expenses for subsistence, clothing, bedding, medicines, administration, etc.

Subsistence per capita.—The cost of subsistence for each prisoner confined in Bilibid was about ₱0.15, which is lower than that of the previous year; that of each prisoner confined in Iwahig, about ₱0.14 as compared with ₱0.13 for 1927; that of each prisoner confined in San Ramon prison and penal farm, about ₱0.14 as compared with ₱0.15 of the previous year; and that each prisoner confined in Fort Mills stockade, Corregidor, about ₱0.14.

The following is a comparative statement showing the increase and decrease in the cost of daily subsistence of prisoners per capita for the past six years:

	1923	1924	1925	1926	1927	1928
Bilibid-----	₱0.1885	₱0.1785	₱0.1768	₱0.1935	₱0.1945	₱0.1558
Iwahig-----	.1612	.1477	.1420	.1435	.1338	.14
San Ramon-----	.1459	.1464	.22	.18	.1574	.14
Fort Mills stockade, Corregidor-----						.14

The notable decrease in the cost of subsistence of prisoners confined in the three insular penitentiaries is principally due to the big production of subsistence supplies in the Iwahig penal colony and San Ramon prison and penal farm. These two colonies shipped to the bureau of prisons sugar, corn, etc., for the subsistence of prisoners confined in Bilibid prison and Corregidor.

Overdrafts and request for deficiency appropriation.—In view of the criticism launched against the prison authorities for allowing overdrafts to be incurred on certain items in the appropriation for the bureau of prisons, it is not amiss to quote herein the following remarks of the director of prisons:

"For the year 1928, the bureau of prisons was given ₱578,000 for consumption of supplies and materials. The undersigned did all that he could possibly do by practicing the most rigid economy simply to obviate the possibility of incurring an overdraft on this item. In spite of this a deficiency allotment of not less than ₱100,000 was requested from the legislature. The main causes of the overdraft are:

"First. The increase in the prison population.

"It may be stated that it is next to impossible to determine before hand the exact number of prisoners who will enter the prison during the year as disturbances and disorders may occur and that as civilization advances criminality increases—thus swelling the prison population.

"In the year 1920 and 1921 when the undersigned was not yet the head of this bureau, the number of prisoners was much less than at present, yet the amounts expended was as follows:

Years	Amounts expended
1920-----	₱919,083.11
1921-----	726,559.00

"The appropriation for the year 1928 was ₱578,000 in spite of an increase of about 20 per cent in the prison population.

"Second. The system of accounting of colony products, such as rice, corn, fishes, and other commodities raised in the penal colonies and issued to the colonists and their families for their subsistence is such that the cost thereof is being charged to the allotment for consumption of supplies and materials and the corresponding income derived therefrom reverted to insular treasury.

"This allotment is, therefore, charged not only with the cost of purchased supplies and materials consumed but also with the cost of produced commodities consumed by the colonists who work in the production thereof. Under this system of accounting overdrafts can not be avoided, as the officials and employees in the central prison and in the penal colonies always endeavor to make the maximum production possible to show that their respective divisions have produced more than the others. In view of this it is recommended that the cost of the commodities (food) produced in the colonies and issued to the colonists for consumption be not charged to the allotment for consumption of supplies and materials and the income derived therefrom not reverted to the insular treasury, as the same are produced through the efforts of the prison officials and employees, the colonists, and prisoners.

"Out of this item are also taken:

"1. Prisoners' subsistence, clothing, medicine, and cigarette allowance.

"2. Materials needed for telephone (in the penal colonies).

"3. Materials needed in the operation of the laundry department and also of (a) ice plants, (b) sawmill, (c) sugar mill, (d) electric lights.

"4. Purchase of agricultural implements, partly.

"5. Supplies for office work.

"6. Supplies for the educational section, etc.

"From the item freight, express, and delivery service, we get—

"1. The expenses incurred in the shipment of supplies and materials needed in the penal colonies.

"2. The freight charges for the shipment to Manila of colony products. The products have to be shipped to Manila for the reason that in the colonies there is no market for these or, if there is any, it is more profitable to sell them in Manila.

"From the item traveling expenses of persons not government employees we get—

"1. Expenses incident to the transfer of prisoners from Bilibid prison to the penal colonies and vice versa.

"2. Traveling expenses of families of colonists from their homes to the penal colonies and from there to their homes upon release.

"3. Traveling expenses of released prisoners except those sentenced by the Manila courts.

"In making these comments the undersigned has no other motive than to request that his recommendations be taken into consideration if it is desired to have a prison well organized and administered."

NATIONAL LIBRARY

Organization and personnel.—On December 7, 1928, Act No. 3477 "Creating the National Museum of the Philippine Islands; providing for its powers, functions, and personnel; providing for funds and its organization and operation; changing the name of the Philippine Library and Museum to National Library, and for other purposes," having been passed by the Philippine Legislature during its first session, was approved by the Governor General. By virtue of the provisions of that act the usual division of the former Philippine Library and Museum became an independent organization to be known as National Museum of the Philippine Islands, whereas the name of the Philippine Library and Museum was changed to National Library.

On April 12 of last year a sad event occurred when, after a very short illness, Director Epifanio de los Santos passed away. Under the guidance and supervision of the late director the library had improved a great deal and was still expecting further progress under his direction when death suddenly brought his task to an end.

Business transacted.—In the circulation division the number of books circulated rose from 112,679 for 1927 to 137,562 for 1928, representing an increase of 24,883 volumes. In the general reference and periodical service the year 1928 witnesses a healthy growth in the use of books, reading attendance, number of reference questions asked, periodical articles indexed, and a number of periodical titles subscribed. Later in the year a new activity was initiated by the establishment of a reading room for the blind, which was started with 94 volumes of books and 5 periodical titles. In this division there were 106,422 book consultations, 114,468 readers, 7,552 research questions, and 6,043 articles indexed. In the Filipiniana service the calls for printed materials or books read in the reading room amounted to 17,572 against 14,005 in 1927, or an increase of 3,567 books, not including bound periodicals, manuscripts, maps, and music pieces. There was also recorded during the year an increase of 2,608 readers over those of 1927.

In the public documents and exchange service there were in stock 24,186 bound volumes, 10,721 unbound, and 279,339 pamphlets, or a total of 314,243 publications. This number was greatly increased at the end of the year by a total of 10,497 publications. In the legislative reference service the number of bills drafted, on the request of individual members of the legislature, has increased from 115 in 1927 to 166 in 1928.

Provincial library extension.—The provincial library extension under which operate the branches of Cebu, Iloilo, Ilocos Norte, Zamboanga, Ilocos Sur, Bohol, Camarines Sur, Baguio, Batangas, and Pangasinan, loaned to the public for home use 103,009 books, while the volumes consulted or read only in the respective libraries amounted to 542,162 volumes. In most of the provincial branch libraries the readers' registration, book circulation, and attendance showed a decided increase during the year 1928, while in others there was a decrease in attendance and circulation due mostly to the lack of supply of new books, particularly in the new branches. In view of the campaign for funds for the purchase of new books for the provincial branches and deposit stations, the Osias library bill, appropriating ₱200,000, was introduced in the senate and was passed by that body, although, on account of lack of time, was not acted upon in the lower house. Some Provinces, like Pangasinan, appropriated certain sums of money for the purchase of books to be added to the provincial library branches.

Due to lack of funds for traveling expenses very little inspection could be made of the provincial branches during the year just ended. However, the acting director of the library conducted an investigation in the Ilocos Norte library and on his return inspected the Ilocos Sur and the Baguio branches. There was one deposit station established during the year at Dumaguete, Oriental Negros, under the supervision and custody of the provincial treasurer. The other deposit stations are the Iwahig penal colony, Daet, Camarines Norte, San Fernando, La Union, Masbate, and Davao. The Philippine Columbian

Association of this city has applied for a deposit station, and the application is now pending action.

Several resolutions were passed by some provincial boards requesting the establishment of library branches in their respective provinces, and the necessary appropriations having been inserted in the budget and sanctioned by the legislature, it is expected that new branches will be established in the near future in the following Provinces: Cagayan, La Union, Nueva Ecija, Tayabas, Oriental Negros, and Jolo. Before the year was over the Province of Tayabas had appropriated the sum of ₱5,000 as its share in the organization of the Tayabas branch library, and at the beginning of the ensuing year steps had been taken to organize the Tayabas branch library.

Registration of copyright.—The copyright registration numbered 198, of which 155 were books, 17 were musical compositions, 1 was a dramatic composition, 7 were periodicals, 6 were motion pictures, 3 were designs, 4 were drawing and graphs, 2 were reproductions of works of art, 1 was a map, 1 a lithograph, and 1 a photograph. Of the 155 books copyrighted, 79 were written by Filipino authors, 67 by Americans, 1 by Filipino and American jointly, and the rest by foreigners actually residing in the Philippine Islands. The total number of copyrighted registration for 1928 exceeded the total number of 1927 by 75.

The museum division.—During the year 1928, the museum was not provided with sufficient funds to increase its collections and therefore no new activities were undertaken. This division received the following:

1. The Old Minerva Press, donated by Dr. Baldomero Roxas.
2. The Tejada Collection, purchased by the Philippine Library and Museum. (A good ethnographical collection for comparative study. It is considered the best from the Caroline Islands.)
3. Belt made of different silver-plated coins and a souvenir penny of Denver, Colo., donated by Mr. Santiago Bautista, of the San Nicolas Intermediate School, Manila.
4. Mapa's collections, donated by Mrs. Mapa.
5. One Filipino chest of native workmanship, bought by the Philippine Library and Museum.

There were 7,068 visitors during the year, and about two-thirds of this number were students from public and private schools. There were also numerous foreign visitors, including tourists and scientists.

Archives division.—This branch of the library had a busy year in 1928. Over 8,000 documents and reports were indexed and classified and about 15,000 other government records were received. At the request of private parties or government officials 474 certified copies of documents and records were issued.

Registration of priests and ministers.—A heavy registration of priests and ministers was recorded during the year, as it was the first time that the law was put into effect. Up to the end of the year 1928 there were registered, under the provisions of act No. 3412, 1,137 Catholic priests, 287 Aglipayan priests, and 401 ministers of the Gospel.

Respectfully submitted.

JOSE A. SANTOS,
Secretary of Justice.

His Excellency the GOVERNOR GENERAL,
Malacanan.

ANNUAL REPORT OF THE SECRETARY OF AGRICULTURE AND NATURAL RESOURCES

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES,
OFFICE OF THE SECRETARY,
Manila, March 15, 1929.

The GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS,
Manila.

SIR: I have the honor to submit the following annual report of the department of agriculture and natural resources for the year 1928.

OFFICE OF THE SECRETARY

The undersigned assumed office and qualified as head of the department on September 6, 1928. Shortly thereafter—that is, on September 22, 1928—Mr. Silverio Apostol, who had theretofore occupied the position of undersecretary and for some time as acting head of the department, died. In the death of Mr. Apostol, not only the department but the whole country as well lost the services of a scientific man and conscientious public servant. To fill the position left vacant by the death of Mr. Apostol, the department has been lucky in acquiring the services of an able executive in the person of Mr. Jorge B. Vargas, then director of lands, who was sworn to office as undersecretary of agriculture and natural resources on October 1, 1928.

During the year certain changes in the subordinate personnel of the office of the secretary were effected by promotions and interbureau transfers.

ORGANIZATION AND PERSONNEL

Little change occurred during the year in the organization and personnel of the department as a whole. The policy of keeping experienced Americans in the service for the purpose of training available Filipinos to gradually take over the technical activities of the government was continued and practically all contract men were retained, including the directors of the bureaus of agriculture, forestry, and science.

The one important change in the organization that took place during the year is the addition to the number of our bureaus by the creation through Act No. 3477 of the national museum of the Philippines.

By reason of the temporary designation of Mr. Jorge B. Vargas, then director of lands, as assistant to the secretary of agriculture and natural resources and his appointment later on to the position of undersecretary of agriculture and natural resources, as mentioned in the early part of this report, Mr. José P. Dans, assistant director of lands, and Mr. Higinio de Guia, chief attorney, were, on September 12, 1928, designated as acting director and assistant director of lands, respectively.

Dr. Stanton Youngberg, the director of the bureau of agriculture went to the United States on May 3, 1928, on leave of absence and returned to the islands on November 26, 1928. During his absence Mr. José S. Camus, assistant director, was designated acting director of agriculture.

As in previous years, the agricultural colonies were, during 1928, managed by the bureau of lands and the bureau of non-Christian tribes, the latter being the administrator of colonies located in non-Christian Provinces. Mr. Antonio M. de Castro, the special agent of the secretary of agriculture and natural resources in the management of the rice and corn funds and the stock farms, died on December 13, 1928, and Mr. Mariano S. de Leon of the office of the secretary was appointed to take his place.

AGRICULTURAL CONDITIONS

The total production of agricultural crops in the country during the year 1928 amounted to ₱472,584,580, representing an average value of ₱40 production per capita. Although this figure is less than the ₱503,666,890 total production in 1927 and the ₱43 per capita production in the same year, it may be said that general agricultural conditions during the year 1928 were on the whole better than those for the 5-year average before the agricultural year 1926-27. The decrease in the total yield during the year may be attributed to several factors. The country was unfortunate in having been visited by six destructive typhoons, which caused great damage to property. These typhoons caused a reduction of the areas planted to several crops and of the yields per hectare. Rice, corn, and tobacco are the crops that suffered most. The destruction caused by locusts was minimized from one-fourth of 1 per cent of the combined areas planted to crops in 1927 to only one-tenth of 1 per cent in 1928. The country, however, was made poorer by the ravages of locusts in the amount of about ₱200,000. Plant pests and diseases also contributed to some extent in diminishing the crop returns, the losses caused by them totaling to the amount of approximately ₱9,000,000.

Most of the principal crops did not command good prices during the year. This situation discouraged the farmers and made them lose interest in replanting the seedlings destroyed by the typhoons. There was a good market, however, for coconuts, coffee, and cacao; and the good prices offered for these crops resulted in an increase in the areas planted thereto as well as in production. The prices of sugar were lower in 1928 than those of the preceding year, but the total production and the yield per hectare of this crop increased due to better systems of farming.

DEVELOPMENT AND EXPLOITATION OF OTHER NATURAL RESOURCES

Forest resources.—The feverish activities noted in lumbering circles in 1927 cooled down to normalcy in 1928. The excitement of the previous year having subsided, the lumbermen got down to developing their holdings with the result that a greater amount of lumber was produced in 1928 than in 1927 and that bigger quantities of round logs were sold locally as well as exported abroad. The total cut by all sawmills and 5 logging operations without sawmills for the year 1928 amounted to 1,263,496.96 cubic meters, with corresponding forest charges of about ₱1,180,677.57, as compared with log scale of 955,114.72 cubic meters with corresponding forest charges of ₱867,579.75 accounted for by 50 sawmills and 4 logging operations in 1927. The year 1928 witnessed the opening of 21 new sawmills, the beginning of big-scale production by 6 sawmills or logging operations, and the incorporation of 11 sawmills or lumber companies with an authorized capital of over ₱3,050,000 and paid-up capital of ₱1,548,000.

It is unfortunate, however, that the year just passed saw the passing of control of two 20-year license agreements away from American and Filipino hands. The change of ownership of these two concessions increased the number of 20-year license agreements controlled by Chinese from 3 to 5, and reduced that controlled by Americans from 6 to 5. The sale of the Zambales Lumber Co. by Mr. Teodoro Yanco to Dee Hong Lue completely eliminated Filipinos from the list of concession holders.

The foreign markets for Philippine timber were, in 1928, menaced by the adverse decision of the Federal Trade Commission on the Philippine mahogany case and by the passage of new tariff laws in Australia increasing the duty on lumber imported from the Philippines. Despite, however, these measures, there has been a great demand abroad for Philippine lumber. There was noted in 1928 an increase of 19 per cent in the export over the previous year. And the coming to the islands in 1928 of representatives of big lumber concerns in the United States, China, and Japan with the object of making connection with local lumbermen augurs a bright future for the lumber industry.

Because of constant depredation on the public forests by illegal cutting and fires, there is need of conserving these resources for future generations by the taking of appropriate measures. The legislature has set aside funds for this purpose and during the year, two reforestation projects—the reforestation at Camp 7, Cebu, and that in Ilocos—were financed.

Mineral resources.—The year 1928 registered great activity in the exploitation and development of the mineral wealth of the country. In comparison with

previous years, more mining locations were staked out and a greater number of lode patents was granted during the year. Up to December 31, 1928, there were 702 standing mineral land concessions of various kinds, involving an area of 10,168.1776 hectares. As in previous years, the center of the greatest activities and development was in the Benguet mineral lands district. There was not much activity in the Suyo-Mankayan region due to the low price of copper in the market.

By keeping up the present movement, there will perhaps be greater production of mineral wealth during the coming years, especially if we consider that the Colbath drain tunnel has recently been completed by the Benguet Consolidated Mining Co., which will make possible the working of the lower levels of the Antamok mines. Mention may also be made of the fact that the Agno hydroelectric plant of the North Luzon Power Co. is almost complete and will be able to supply electric power to all the mining properties of the Benguet district, by means of which power it will be possible to work profitably even the mining properties of ores of low values.

ADMINISTRATION OF THE PUBLIC DOMAIN

The number of public-land applications approved and patented in 1928 exceeded that of the preceding year. This is especially true of free patents which registered an increase of 263 per cent in the number approved. There was, however, a decrease in the total number of applications recorded in 1928 in comparison with the number received in 1927. This decrease which should not be interrupted as a lessening of the interest of the people to acquire public lands is due to the policy recently inaugurated of not accepting applications the lands covered by which have not yet been certified as agricultural lands, except those filed under the free patent provisions of the public land act and those for residential, industrial, or commercial purposes. The reasons for this policy are set forth under the heading "Bureau of lands," public lands concessions, of this report.

During the year, the land department was called upon to hear and determine thousands of cases of public land claims and conflicts, 1,033 of which have been finally decided. Year by year these conflicts and claims arise as an inevitable result of sociological conditions developing in newly opened regions in the Philippines, and while efforts are being exerted toward a careful study of the fundamental causes of public-land controversies, our main concern has been to reduce agrarian questions to their lowest expression. Success along this line will surely come along with the enlightening of the masses on their rights and duties as circumscribed by the public land laws and regulations. As an example, it may be stated that it was the use of this means that serious agrarian questions affecting the Malibay subdivision were peacefully settled. I am happy to state that during the year no agrarian controversy affecting the public lands reached to a proportion that would have created social disorder in the community.

The greatest problem confronting the administration of the public domain is its disposition to the people within the shortest time possible, subject, however, to the bounds and limitations of the public land law. If we are to consider that in 1928 the extent of the public land patented through homestead, the most popular way of acquiring a public land, amounted only to 13,668,411.4 hectares, and if we are to consider further that of the total area of 29,629,600 hectares of the Philippines, 7,154,877.35 hectares have already been classified and certified as alienable and disposable, it will be realized that the task of administering the big mass of the public domain is not an easy one. At the present rate of alienating the public domain it will take a long time yet before the development of our public lands can be fully attained. For the purpose of accelerating the disposition of the public domain and at the same time providing for a more rapid exploitation of the agricultural resources of the country the undersigned proposed during the last sessions of the legislature a plan patterned after the highly organized sugar industry on the basis of an industrial central surrounded by a large agricultural area dedicated to certain specified products. Under this plan an area of not more than 20,000 hectares of public land would be set aside in each instance for subdivision into lots of convenient sizes for individual purchasers. A corporation may then take up an area not exceeding the maximum established by law, subject to the condition that such corporation will finance all public-land applicants who might be

willing and ready to work within the project under such terms and conditions as may be approved by the government. The plan, if enacted into law, would in a great measure solve the problem of disposing of and developing the public lands in the Philippines. While the plan has received enthusiastic support from the business elements of our people, the legislature did not take it up formally, due, perhaps, to the desire of that body to give it a more careful study.

It is gratifying to note, however, that our legislative leaders are giving a closer attention to the tremendous task of administering the public lands as evidenced by the passage by the last legislature of three important laws affecting the public domain, namely, the amendments to the public land law (Act No. 3517), the creation of 10 cadastral judges (Act No. 3433), and the increase of the cadastral survey loan fund to ₱500,000 (Act No. 3452). The most noteworthy feature of the amendments to the public land law is the giving to public-land applicants of greater facilities in the matter of obtaining patents by requiring only one-fourth of the area to be cultivated, by reducing to only one year the minimum period within which final proof of a homestead may be filed, and, lowering the homestead fees to only ₱10. These facilities, together with a rapid survey of the public domain, the opening up of public lands with good roads, and the early determination of the status of lands supposed to belong to the public domain will no doubt hasten the disposition and development of the public domain and in the end, bring about an improvement in the economic conditions of the Filipino people.

SCIENTIFIC ACTIVITIES

The year 1928 was rich with activities calculated to promote and advance the cause of science. Scientific achievements during the year covered a wide field, touching almost every phase of human activity in the Philippines.

An important scientific activity which is worthy of mention is that being undertaken by our bureau of science in helping protect the health conditions in the islands. An examination of foods manufactured in and imported into the Philippines is made every year to determine whether such foods meet with the requirements of the pure food and drugs act. During the year 1928 over 14,000 examinations were made on food articles and soft drinks. Bacteriologic examinations are made on persons who handle food in Manila, and waters all over the Philippines are examined both bacteriologically and chemically. About 8,000 examinations of water were made in 1928. The vaccines manufactured by the department's bureau of science have prevented the outbreak of epidemic diseases. About 7,200,000 doses of these vaccines were dispensed in 1928. Among the most important of these were vaccines against smallpox, cholera, typhoid, and dysentery.

This same bureau has conducted researches which have aided the development of Philippine industries and the promotion of sanitation and the advancement of medicine. It has assisted in the development of the mining industry by geologic survey work, investigating economic mineral deposits, assaying ore and bullion, testing ores for milling purposes, identifying minerals, and examining mines and prospects for private parties. It has examined soils and fertilizers for the farmers. It has been consulted by the fishermen on problems affecting the fishing industry. The work being done by the bureau of science for the public is indeed of incalculable benefit to the country.

Our bureau of agriculture has also contributed its share to the promotion of scientific activities particularly coming under its jurisdiction. Different plants, especially the major staple crops, were subjected during the year to acclimatization tests, variety tests, fertilizer tests, cultural tests, selection tests, and tests for soil adaptability, and to many other experiments, with a view to greater production and improving the quality. The research work of the veterinary research laboratory has during the year been confined to two major projects, (1) experimentation on rinderpest vaccine and (2) research on the new avian disease tentatively named "avian pest." A more satisfactory method of inoculation of rinderpest vaccine has been discovered by the adoption of the intramuscular method of injection. Research on the new avian disease has resulted in accumulation of much knowledge regarding the nature of such disease.

The activities performed by our weather bureau are scientific in character and are also of great importance to the people. The services rendered by that bureau in giving typhoon warnings and in broadcasting time signals have always proven beneficial, not only to commerce, industry, and navigation, but also to the proper development of the natural resources of the country.

LEGISLATION

The most important laws approved in 1928 by the Philippine Legislature affecting the department of agriculture and natural resources, aside from the general appropriation law (Act No. 3459) and the public works law (Act No. 3460), are the following:

Act No. 3443: An act to appropriate the sum of ₱50,000 for the establishment, equipment, maintenance, and operation of seed farms for rice, corn, sugar-cane, and other staple crops under the bureau of agriculture, and for other purposes.

Act No. 3447: An act to provide for the acquisition of lands and the transfer thereof to the Government of the United States in exchange of lands known as Fort San Pedro and Warwick Barracks, Cebu, Cebu, and for other purposes.

Act No. 3452: An act amending sections 5, 6, and 7 of Act No. 3327 entitled "An act authorizing private surveyors to make cadastral survey, and for other purposes."

Act No. 3463: An act to amend section 383 of Act No. 2711, commonly known as the revised administrative code for 1917 (re repayment of excessive collections of taxes on real property).

Act No. 3465. An act to amend subsection (a) of section 18 of Act No. 2259 entitled "An act providing certain special proceedings for the settlement and adjudication of land titles," as amended by Acts Nos. 2338, 2558, 3081, and 3337 authorizing Provinces and municipalities or municipal districts to pay their share of the cost of registration proceedings and cadastral surveys in equal installments within a period of five years, without any interest.

Act No. 3468: An act authorizing the director of lands to sell certain lots in the barrios of San Roque, Tinago, Tejero, and Panting, in the city of Cebu, to their original possessors and claimants or successors in interest, and for other purposes.

Act No. 3473: An act to amend sections 1, 2, and 5 of Act No. 3371 entitled "An act authorizing the director of lands to sell certain lots in the barrios of San Roque, Tinago, Tejero, and Panting, in the city of Cebu, to their original possessors and claimants or successors in interest, and for other purposes."

Act No. 3477: An act creating the national museum of the Philippine Islands; providing for its powers, functions, and personnel; providing for funds for its organization and operation; changing the name of the Philippine Library and Museum to National Library, and for other purposes.

Act No. 3514: An act authorizing the director of lands to sell certain lands of the private domain of the insular government under certain conditions, and for other purposes.

Act No. 3516: An act to amend section 3 and to repeal section 15 of Act No. 2719, known as the coal land act.

Act No. 3517: An act to amend certain sections of Act No. 2874, known as the public land act.

A brief account of the activities of the five bureaus placed under the control and supervision of the department of agriculture and natural resources is set forth under appropriate headings in the pages that follow:

BUREAU OF AGRICULTURE

A GENERAL SURVEY OF THE MAIN CROPS

Palay (rough rice).—The heavy rainfall that culminated in floods due to typhoons during the planting and transplanting seasons destroyed the seedlings and handicapped the field work. This reduced by 1 per cent the area planted as compared with the preceding season. Weather conditions improved later on, however, which offset the loss sustained, so that the total yield was only one-half of 1 per cent less than the record crops of 1926–27. The ravages caused by rice pests and diseases were less this year than in the past, being only 1.23 per cent in 1927–28, as against 1.91 per cent in 1926–27, an improvement of about two-thirds of 1 per cent. The money value of these losses was ₱2,300,000 and ₱3,900,000, respectively. The area planted for 1927–28 was 1,786,960 hectares as against 1,807,060 hectares in 1926–27, and the corresponding yields were 49,921,200 and 49,946,400 cavans of 44 kilos each. There was a very slight improvement in the yield per hectare. The general average production per hectare during 1926–27 was 27.64 cavans. It increased to 27.94 cavans in 1927–28, the highest average yield per hectare recorded. Due to the large

crops gathered in previous years, rice prices have been declining. This seems to discourage many farmers, some of whom are cultivating more profitable crops in their former rice fields. The average prices per cavan during the three previous years were ₱4.27, ₱4.02, and ₱3.67. The corresponding total values of production were ₱204,051,110, ₱200,970,720, and ₱183,262,570.

Sugarcane.—The destructive typhoon of November, 1926, and the frequent heavy rains during that month and December destroyed the young plantations in some Provinces and delayed the planting work in others. The total area planted for the 1927-28 season was, therefore, a little less than that for 1926-27, or 237,000 and 237,350 hectares, respectively. As weather conditions improved later on and commercial fertilizers were used in larger amounts, the farmers succeeded in raising a bumper crop of sugar. The production of all sugars was 11,586,470 piculs of 63.25 kilos each as against 10,999,660 piculs the year before, or an increase of 5 per cent. During the year prices for sugars declined, while those for panochas, basi, and molasses slightly increased. These were ₱9.77 per picul of sugars, ₱8 per picul of panochas, ₱0.15 per liter of basi, and ₱0.11 per liter of molasses. The corresponding prices for the preceding year were ₱10.38, ₱7.65, ₱0.14, and ₱0.10, respectively. The value of all products of sugarcane for the year 1927-28 was ₱114,136,710 as against ₱113,591,090 the year before, or an increase of 1 per cent.

Coconuts.—On June 30, 1928, there were 515,510 hectares planted with 98,056,330 trees as against 500,010 hectares and 94,877,740 trees the year before, or an increase of 3 per cent in the number of trees planted. The average yield per tree remained the same, 31 nuts. The production of copra during the year 1927-28 was 6,840,530 piculs of 63.25 kilos each and that of coconut oil (home-made), 1,933,580 liters as against 6,484,750 piculs of copra and 1,973,710 liters of coconut oil the preceding year. The number of coconuts used for the desiccated coconut industry and for consumption as food was 163,211,000 in 1927-28 and 160,276,000 in 1926-27. Besides these, coconut trees produced this year 113,694,610 liters of tuba as against 107,772,910 during 1926-27. Prices for coconut products did not change materially this year. The total value of all coconut products amounted to ₱85,408,430 in 1927-28 as against ₱81,985,970 in 1926-27, or an increase of 4 per cent.

Abaca (Manila hemp).—There were several hundred hectares newly planted to this fiber plant and an increase of nearly 100,000 piculs in the production, though the prices averaged less than those during the preceding year. On June 30, 1928, there were 480,730 hectares planted as against 480,150 one year before and the corresponding areas in production were 394,910 and 381,490 hectares. From these extensions there were gathered 2,826,340 piculs of fiber of 63.25 kilos each during the year under review and 2,731,630 piculs during the preceding year, or an increase of 3 per cent, but the average yield per hectare during both years remained exactly the same, 7 piculs. Abaca during the year 1927-28 suffered a decrease in the total value of nearly ₱5,000,000, or a falling off of about ₱2.50 in the average price per picul. The total values were ₱54,362,440 for 1927-28 and ₱59,240,800 for 1926-27, and the prices per picul averaged ₱19.23 and ₱21.69, respectively.

Corn.—Corn registered, among all crops considered, the largest decrease during the year 1927-28, due to the abundant crops of rice during this year and the last, low prices for corn, and adverse weather conditions. There were 519,680 hectares planted to this grain as against 561,430 hectares during 1926-27, or a loss of 8 per cent. The production decreased from 8,384,710 cavans of 58 kilos each in 1926-27 to 7,342,300 cavans in 1927-28, or a loss of 13 per cent. This crop is the smallest since 1923. This crop was sold at the average of ₱3.55 per cavan, during the year 1927-28, and the entire production brought to the farmers ₱26,047,100. The corresponding figures for 1926-27 were ₱4.14 and ₱34,697,470, respectively.

Tobacco.—For the same reasons that affected the corn crop—that is, unfavorable weather and declining prices—tobacco registered decreases both in the area planted and the yield during the year. There were 80,480 hectares put into tobacco which yielded 1,003,840 quintals of leaves of 46 kilos each, while the year before the area was 83,970 hectares and the yield 1,091,660 quintals, or a loss of 4 per cent in the extension and of 8 per cent in the production. The total value of the crop amounted to ₱9,334,770 during the year 1927-28, at an average price of ₱9.30 per quintal. The year before the price averaged ₱12.09 per quintal and the whole crop was worth ₱13,080,830.

Maquoy.—The total area planted to this crop on June 30, 1928, was 35,630 hectares, and this area has been steadily increasing since the year 1921-22.

There were produced during 1927-28, 308,580 piculs of fiber, of 63.25 kilos each, as against 315,470 piculs in the preceding year, or a decrease of 2 per cent. Because of this decrease in the yield and lower prices the total value of this fiber decreased, too, from ₱3,838,490 in 1926-27 to ₱3,288,130 in 1927-28, or a loss of 14 per cent. The average prices per picul in 1927-28 and 1926-27 were ₱10.67 and ₱12.17, respectively.

Cacao and coffee.—On June 30, 1928, there were under cultivation 2,156,800 cacao trees and 2,842,700 coffee trees, as against 2,042,500 and 2,533,700 trees, respectively, the year before. On the same date (June 30, 1928) there were in production 1,244,000 cacao trees and 1,522,000 coffee trees, and they yielded 1,172,900 kilos of cacao and 1,236,600 kilos of coffee, as against 1,089,100 and 1,209,800, respectively, in the preceding year, or an increase of nearly 8 and 2 per cent. Prices for these two products during 1927-28 did not change materially from those in 1926-27, cacao having sold at ₱0.94 per kilo in 1927-28 and ₱0.92 one year before, while during the same periods coffee prices were ₱0.69 and ₱0.70 per kilo. At these prices the cacao and coffee produced were sold in 1927-28 for ₱1,183,700 and ₱868,600, respectively, as against ₱1,127,600 and ₱840,800 in the previous year.

LIVESTOCK

The census for livestock is made as of December 31 of each year. As there is no time to complete the compilation of the data gathered on that date in the short period between the end of the year and the date fixed for presenting this report, the figures given for animals are one year behind.

The year 1927 was generally rainy, and on this account the rate of birth of all animals, except horses, was below that for 1926, although the decreases were generally very insignificant. These decreases were 0.3 per cent for cattle and hogs, 0.13 per cent for goats, 0.02 per cent for sheep, and 1.19 per cent for carabaos. The rate of birth for horses increased by 0.34 per cent.

The situation as to animal diseases improved considerably during the year 1927, except in the case of horses. There was a reduction of 0.3 per cent in the rate of mortality for carabaos, 0.36 per cent for cattle, of 0.22 per cent for hogs, of 0.23 per cent for goats, and of 0.08 per cent for sheep, while it increased by 0.44 for horses.

PERSONNEL

At the beginning of the year there were 270 permanent and 282 temporary employees, making in all 552 employees. During the year 112 were appointed and 5 transferred to the bureau, while 39 resigned, 77 were separated, and 3 transferred to other bureaus, making the working force of the bureau at the end of the year 277 permanent and 273 temporary employees, or a total of 550 employees.

FIXED ASSETS

The total value of the fixed assets of the bureau for 1928 was ₱1,387,086.85, while the value of those for 1927 was ₱1,281,968.92, or an increase of ₱105,118.03.

DIVISION OF PLANT INVESTIGATIONS

The work of testing and experimentation of plants with a view to greater production and to improving the quality began in previous years was continued in the year 1928. A total value of approximately ₱45,822 of seed and plant materials were propagated and distributed for cooperative trial planting and foreign exchange and for sale. Mention may be made of the fact that of the special allotment given by the fiber standardization board on January 20, 1928, for the improvement of the Philippine fiber industry, in accordance with Act No. 3263, the amount of ₱12,000 was given for research work. In this new project one of the most important features is the chemical investigation of problems of any nature relating to abaca.

AGRICULTURAL EXTENSION DIVISION

The division conducted food production and reconstruction campaigns in cooperation with local officials and the Red Cross in the Provinces worst hit by the typhoon of November. Assistants were temporarily detailed in all the places worst hit by the typhoon, like Samar, Masbate, and Sorsogon, where the

bureau has no men, in order to help the people and induce them to plant quick-growing food crops and abacá plants. In the Cagayan Valley, where tobacco plantations suffered from floods on account of the same typhoon, campaigns were waged to replant as much as possible the damaged fields and the farmers assisted in getting the seedlings needed.

As a result of the bureau's horticultural campaign over 600,000 fruit trees were planted in the districts where agents were assigned. Of the above number of seedlings, 300,000 were coffee.

The agricultural extension agents helped the farmers to plant different kinds of fruit trees properly and demonstrated different methods of plant propagation. In the different districts and nurseries there were budded 8,438 citrus and 486 other plants; 6,537 mango, 352 lanzon, and 907 other plants were grafted. Of these marcotted, 954 were chicos, 221 lanzon, 552 citrus, and 614 other plants, while those pruned to improve the trees were 4,506 coffee, 1,978 cacao, 12,986 citrus, and 4,241 other plants.

Seed and plant material distribution was made from the central office, the Singalong plant propagation station, the insular nurseries in Lipa and Iloilo, and through the bureau's field men. Part of the different materials, like coffee seeds, sugar cane, budded citrus, and some field crops, was furnished by the plant industry division.

The vegetable seeds and other miscellaneous plant materials distributed by the central office and the Singalong plant propagation station were valued at ₱28,698.22.

PLANT PESTS CONTROL DIVISION

The ₱6,000 annually appropriated under Act No. 3027 to be used by the bureau and the plant quarantine board in enforcing plant quarantine was made available for the first time since the enactment of the law, and about ₱3,000 of this fund was actually spent during the year, as the money was released only in October. Of the ₱45,000 apportioned by the fiber standardization board (Act No. 3263) to the bureau of agriculture, ₱9,000 was set aside for the study and control of abacá pests and diseases.

Whereas in previous years locusts were present in several Provinces of the Visayan Islands, this year the bureau has succeeded in ridding these islands of the pest, except in the earlier part, when Oriental Negros was yet infested—a continuation of the infestation of 1927. The bureau has succeeded in keeping the pest within the confines of northern Luzon and mostly in places where no standing crops were present. It can be seen that whereas out of the 134 municipalities infested in 1927, 26 remained infested at the end of the year, we had but 9 municipalities out of 167 infested by December 31, 1928.

As usual, a large number of complaints and inquiries were made about pests, such as those of rice, sugar cane, tobacco, abacá, mango, citrus, vegetables, etc., from practically all sections of the country. Whenever possible and considered necessary men were sent to the places infested to show the complainants how to control the pests concerned.

RURAL CREDITS DIVISION

In spite of some difficulties, especially in the administration of the rural credit associations in the Philippines, it is gratifying to note that such associations have been a timely help for needy members, particularly for those who have been forced to enter into contracts with usurers and submit to their impositions to secure additional capital with which to carry on their agricultural undertakings. During the year 1928 new associations were organized in four municipalities.

The collection of overdue loans during the year 1928 met with better success than last year except in those places which suffered during the devastating typhoons which visited the Islands in 1928, and from the eruption of the Mayon Volcano which latter calamity kept rural credit associations in the Bicol region stagnant. No serious cases came up during the year which needed court intervention, except that of Sibalom, Antique, and that of Arevalo, Iloilo.

ANIMAL INDUSTRY DIVISION

Veterinary Section.—During the year there arrived at the port of Manila 7,907 cattle from Australia, and 40 from the United States. No carabaos were imported. This marks a decrease of 2,760 head of cattle as compared with 1927.

There arrived at Manila from interisland ports 16,483 cattle and 2,645 carabaos, an increase of 745 cattle and 30 carabaos over the previous year. A total of 156,648 animals of all kinds were inspected upon arrival at Manila, for which fees amounting to ₱20,281.30 were charged and collected.

During the year 3,650 cases of rinderpest were reported, with 2,692 deaths from this disease. This constitutes an increase of 637 cases and 569 deaths over the previous year, but is far less than the average for the past 15 years. The provinces in which the disease were present during some part of the year are Abra, Antique, Cagayan, Ilocos Sur, Iloilo, Isabela, Mountain, Occidental Negros, Pampanga, and Tarlac.

There were reported sporadic cases of anthrax during the year in Batangas, Bulacan, Cavite, Laguna, Nueva Ecija, Pampanga, Pangasinan, Rizal, and Tarlac. The total number of cases and deaths were 313 and 287, respectively, representing a reduction of 9 cases and 14 deaths as compared with the cases and deaths registered during the previous year; 62,480 carabaos and cattle were given simultaneous treatment with anthrax vaccine and antianthrax serum as compared with 48,677 carabaos and cattle given the same treatment during the preceding year.

During the latter part of May an outbreak of rabies was discovered by the bureau in a herd of 130 cattle in the province of Tarlac. This is the first time that rabies has been reported in cattle in the Philippines. The disease has been reported in horses, however, on three different occasions.

There were less outbreaks of the foot-and-mouth disease reported last year, it having been stopped from moving farther north than Tarlac. The provinces registering cases were Bataan, Bulacan, Iloilo, Laguna, Manila, Occidental Negros, Oriental Negros, Pampanga, Rizal, Tarlac, and Tayabas. The total cases and deaths were 3,749 and 90, respectively, as compared with 24,232 cases and 375 deaths reported last year. There were reported 268 cases of surra.

Animal husbandry section.—The work of the personnel in advising people with regard to the proper care, feeding, and management of livestock, in giving public demonstrations on caponizing and selection of animals and poultry, and in the operation of the bureau stock farms and breeding stations has been continued during the year 1928. Experiments on breeding and feeds and feeding are also being carried on.

The public breeding work in 1928 is shown in the following table:

Sires	Services	Offspring	Estimated value
Stallions.....	509	125	₱12, 500
Bulls.....	708	341	17, 010
Boars.....	852	2, 572	38, 580
Bucks.....	59	22	110
Rams.....	80	53	265

DIVISION OF PUBLICATIONS

During the year there were published 1 annual report, 4 issues of the Philippine Agricultural Review, 4 issues of the Ang Magsasakang Pilipino, 6 bulletins, 2 new circulars, 9 old ones, 1 miscellaneous agricultural information, 2 series of radio lectures, 6 miscellaneous publications, and 4 posters. During the same period 205,392 of these publications were distributed as against 201,909 in 1927, an increase of 3,483.

BUREAU OF FORESTRY

GENERAL SUPERVISION AND ADMINISTRATION

The policy of gradually decentralizing the activities of the bureau has given more freedom to the district foresters in handling their respective forest problems.

During the year extensive inspection of forest districts and stations was made.

In view of the shortage of foresters to take charge of the districts, three are still under experienced rangers while a few have been consolidated for purposes of administration under two district foresters.

As a whole, the supervision of field men and the solution of the problems by the district foresters have been very satisfactory. As technically trained men become available, some of the activities of the central office will be delegated to the district foresters. The central office will then only act as a guide and will only concern itself with the problems dealing with the fundamentals of policy, supervision, administration, and legislation affecting forestry interests and the organization as a whole.

COLLECTIONS

During the year there have been collected as forest charges and other income the amount of ₱1,781,535.31. This represents the total income of the bureau. The amount appropriated by the legislature for the same year amounted to ₱743,216.21, of which ₱712,189.55 was actually expended, leaving a surplus of ₱1,069,345.76. In other words, a net gain of ₱1,069,345.76 was realized by the bureau for 1928.

LUMBERING IN GENERAL

The year just passed was but a continuation, from a lumberman's point of view, of the prosperous year 1927. The year 1928 did not witness the feverish activities noted in lumbering circles in 1927 simply because the lumbermen seemed to have found their bearings and devoted most of their time to developing their holdings. Compared with 1927, there were less permanent improvements introduced in 1928 and comparatively less equipment was purchased. The year 1928, however, witnessed the opening of 21 sawmills.

FOREIGN MARKETS

The total export for the year 1928 amounted to 85,897,736 board feet valued at ₱6,258,819 as compared with 72,034,632 board feet valued at ₱5,580,003 in 1927, or an increase of 19 per cent. The coming to the islands in 1928 of representatives of big lumber concerns in the United States, China, and Japan with the object of making connections with local lumbermen indicate that bigger amount of export in 1929 may be expected.

LOCAL MARKETS

Local lumber dealers were satisfied with the year just passed because the prices of lumber were high and remained so throughout the year. The construction of several new sugar centrals, the additions of many new buildings in Manila and other important towns as well as the extension of the Manila Railroad toward the Bicol region were factors that contributed in making the local markets satisfactory from the lumber dealer's viewpoint. Over 170,000,000 board feet of lumber were shipped to local ports during the past year as compared with about 142,000,000 board feet in 1927.

GRADING AND LUMBER INSPECTION

Due partly to the falling off in the export to Australia because of the increased tariff, and partly because Philippine lumbermen and buyers abroad have a better understanding as to quality or grades, the amount of lumber inspected by bureau of forestry inspectors was considerably less in 1928 as compared with that in 1927. The demand for minor inspection in 1928 was practically the same as that in 1927, but scaling of round logs either for export or for the local markets was considerably bigger than in any previous year. Our scale serves not only as the basis of collecting forest charges, but is used as the basis for commercial transactions.

ACTIVITIES OF TIMBER LICENSEES

There have been cut and invoiced by the ordinary timber licensees during the year, 1,439,317 cubic meters of timber as against 1,140,664 cubic meters of timber cut last year. Minor forest products licensees have also shown considerable activity during the year.

INSPECTION AND PATROL WORK

The inspection and patrol work carried on during the year has been very productive of results as it appears on record that there had been detected 822 cases of violations of licensees, 825 cases of violations of nonlicensees, covering a total of ₱41,923.04 in regular and additional forest charges. Forest destruction amounting to 105,167.42 cubic meters of timber and firewood with a total of ₱172,134.38 in forest charges and treated under "illegal cañigins" was also detected.

LICENSES ISSUED

During the year there were issued a total of 7,815 licenses as against a total of 7,752 granted in 1927. Of this number 2,271 were commercial timber licenses; 3,027 ordinary minor products licenses; 128 public gratuitous licenses; 20 miners' gratuitous licenses; and 2,369 private gratuitous licenses.

SPECIAL PERMITS

During the year there were handled in this office 6,507 applications for special permits as against 3,567 acted upon last year, or an increase of 82.4 per cent. Of the number acted upon 550 are for fish-pond permits, 34 for salt works, 821 for pastures, 4,163 for residence, 312 for Nipa and Bacauan plantations and 627 for other special uses. There were granted during the year, 2,403 special permits as against 2,169 issued last year, or an increase of 10.7 per cent. With the permits issued in previous years as well as those that were renewed, there were in force 6,470 permits and leases as against 6,364 in force in 1927, or an increase of 1.7 per cent.

CAÑIGINS

There has been a slight decrease in the number of permits issued, there being granted 1,091 permits as against 1,463 issued last year. Of this number 994 permits were granted on public lands, 73 on claimed private lands, and 24 on leases with the bureau of lands; 380 applications for cañigin permits were disapproved as against 165 disapproved last year.

There were reported this year by the local forest officers 1,774 cañigin cases as against 2,002 cases detected in 1927, or a slight decrease of 11.38 per cent. The total area cleared this year is 1,602.95 hectares against 1,743.92 hectares cleared last year, the forest products destroyed being 105,167.42 cubic meters of timber and firewood and 90,500 pieces of bohos, the regular and additional charges of which amount to ₱172,134.38 against 96,454.76 cubic meters of timber and firewood and 226,350 pieces of bohos destroyed last year valued in forest charges at ₱145,233.52.

The making of cañigin is still a problem. It is fundamentally an educational problem, hence its solution will necessarily be slow.

LAND CLASSIFICATION

The number of projects certified to the bureau of lands during the year is 180 with a total area of 1,129,324.08 hectares, of which 1,014,077.37 hectares are alienable and disposable and 115,246.71 are timberlands. Of the total area of the Philippines (29,629,600 hectares), there was certified to the director of lands during the last 9 years, an aggregate of 9,372,319.36 hectares, excluding an area of approximately 737,000 hectares of classified lands whose maps were under preparation at the close of 1928. Of these 9,372,319.36 hectares of classified and certified lands, 7,154,877.35 hectares are alienable and disposable and the remaining 2,217,442.01 hectares, are timberlands. The balance which remains unclassified is 20,257,280.64 hectares.

TIMBERLAND

During the year 321 blocks of timberland containing an aggregate area of 115,246.71 hectares were delimited as against 343 blocks in 1927 with an area of 74,034.07 hectares.

FOREST RESERVES

The survey of the proposed norther Masbate Forest Reserve was completed during the year by a party of forest surveyors. The work on the proposed Mount Isarog Forest Reserve in Camarines Sur was begun after the middle of the year.

RECONNAISSANCE AND TIMBER ESTIMATE

The reconnaissance of Mount San Cristobal, Laguna, having been finished, the work on Mount Banahao was commenced this year. This mount is also a part of the Mount Banahao-San Cristobal Forest Reserve, established by proclamation of the Governor General on October 14, 1921.

FOREST LANDS REGISTRATION CASES IN COURTS

The number of cadastral and ordinary cases received during 1928 are 120 and 1,850 as compared with 94 and 1,735, respectively of last year. Of these cases 2,125 cadastral lots and 233 parcels of ordinary cases needed inspection, one remaining having been located on the maps and found to be of no forestry value. There were 4,729 cadastral lots and 182 parcels of ordinary cases inspected, leaving 16,522 cadastral lots and 51 parcels of ordinary cases pending inspection. Opposition against the registration of 89 cadastral lots and 29 parcels of ordinary cases were sustained and opposition to registration of 40 cadastral lots and 153 parcels of ordinary cases were withdrawn.

COMMUNAL FORESTS

At the beginning of the year there were 125 cases of communal forests pending and during the year 27 new cases were received. There were established 66 parcels with a total area of 8,813.2849 hectares during the year, leaving a balance of 86 parcels pending.

Due to the recent typhoon which devastated the southeastern part of Luzon and the Occidental Visayas, the suspension of the communal forests of the regions affected was ordered.

COMMUNAL PASTURES

There were 7 parcels of communal pastures inspected and surveyed with an area of 3,919.80 hectares.

GROWTH STUDIES

The measurement of about 690 trees comprising 8 commercial species in the Makiling National Botanic Garden was continued this year, and the records entered in the regular notebooks.

SEASONING STUDIES

Investigations on the seasoning of timber were continued. The following studies are in progress: Air seasoning, shrinkage of wood from green to air dry and from air dry to oven dry, relation of ordinary temperature to the expansion and shrinkage of some Philippine woods, tendency of species to develop defects in seasoning, and working qualities of Philippine woods.

WOOD PRESERVATION AND DURABILITY TESTS

Various durability test experiments in progress were examined. Experiments to determine the relative resistance of the more common woods to marine wood borers have been conducted and examined after every three months.

WOOD-USING INDUSTRIES

The wood-using industries used a greater amount of wood last year than the year previous. House construction, furniture trade, and other industries utilizing wood as raw material were unusually active.

EXTENSION SERVICE

This bureau has been of service to the public in the identification of woods, in the furnishing of information on the strength, durability, seasoning, uses as well as preservation of Philippine woods. It has also furnished information on all minor forest products. It has cooperated with the bureau of public works in the selection of woods used for various purposes in construction work and has done a similar cooperative work with the United States Army and Navy.

WORKING PLANS AND SPECIAL PROJECTS

With the development of forestry practice in this country, there is need of establishing permanent sample plots in forest reserves throughout the islands, where the fundamental problems of forestry are intensively studied and their results applied in terms of their usefulness to the industry or to the business of timber protection and to the problems of forest conservation. The data on growth and increment are of first importance in systematic forest management.

The collection of data for the preparation of a working plan for the Makiling Forest Reserve has been continued. A similar work for the same object in the Salinas Forest Reserve in Nueva Vizcaya has been partly finished. The Buri forest in San Antonio, Nueva Ecija, and Concepcion, Tarlac, has been studied, and the data are now being worked out for a proposed working plan of that forest. The working plan for the Baguio working circle prepared in 1919 is the only one in operation. It is expected that during next year, enough data will be collected to enable the bureau to prepare working plans for important forest tracts covered by license agreements.

REFORESTATION

The work of reforestation started in the past years in the Agno River Valley and in the Bukidnon quinine project was continued. The projects—the reforestation at camp 7, Cebu, and that in Ilocos—were financed during the year with funds under the reforestation act (No. 3283).

The extensive planting survey and delimitation work of the entire Agno Valley has been finished. The total approximate area is 157,738 hectares. Of this, 60 per cent needs planting while the rest is either cultivated or covered at present with forest that needs no planting. This means an enormous project of long duration, if the Government is to realize the effects of forests on erosion and flood control.

A forest nursery was established in Ambuklao, Bokod, Benguet, during the early part of the year. This nursery is intended to produce about 1,000,000 seedlings annually for planting in the Agno Valley in accordance with the reforestation act.

As regards the Talisay-Minglanilla reforestation project, considerable progress has been made therein as follows:

Seeds of various species, principally narra, molave, palomaria, malaruhut, and teak amounting to 913 liters were sown. Also 33,311 cuttings and seedlings of various species principally madre cacao, molave, palomaria, ipil, akle, kupang, supa, and teak were planted. Many of these seedlings were taken from Nurseries I and II which have been overcrowded with mature seedlings. These two nurseries are now abandoned, the remaining seedlings being allowed to grow. Instead, Nursery III was extended. The extension has an area of 625 square meters. A canal was dug on the eastern side of this nursery to deviate the flow of surface run-off.

Considerable cleaning was done on the lawn, nurseries, trails, and plantations. More than 12 hectares of the plantations were cleaned. The result was that the trees showed more vigorous growth.

The reforestation work in Ilocos was concentrated in the vicinity of Caniaw, Bantay, Ilocos Sur, where a forest nursery exists. At the end of the year there were 13,459 seedlings on the seed beds and 6,898 transplants ready for planting. In all, there were 202 beds in the nursery, 150 of which are occupied by seedlings and transplants. A total of 13,462 seedlings were planted during the year. Roads, trails, and bridges were constructed inside the planting area to facilitate transportation and administration of the project.

The work in the quinine reforestation project in Bukidnon has been pushed with greater vigor during the year. The improvements made in this project are as follows:

A total of 127 seed beds and 41 transplant beds were made in these two nurseries, and, with the exception of 29 of the seed beds, all were sown with seeds. A total of 3,505,706 seeds of various species were sown during the year, 617,040 of which were quinine, 2,888,666 forest trees, 2,840 fruit trees, and 18,407 ornamentals.

Seedlings numbering 5,528 were set out in the field. These seedlings were principally narra, palomaria, kapok, ipil, pines, teak, lumbang, and mahogany. An inventory made at the end of the year showed that 4,389 of these seedlings were living. In other words, there was a mortality of but 21 per cent, which is considered good. These plants were planted in the immediate vicinity of the nurseries and plantations to serve as windbreaks. No quinine seedlings have so far been set out to the plantation because they were still small and young at the end of the year.

At the end of the year there remained in the nursery 33,000 seedlings of forest tree species, 2,975 fruit trees, 4,101 ornamental trees, and 16,931 quinine. Seedlings of euclayptus, Benguet pine, etc., were distributed mostly to school authorities in connection with the celebration of Arbor Day.

At the early stage of the development of the quinine seedlings, it was found that they are subject to a "damping off" disease, but this has been gradually controlled by regulated light, aeration, and watering. Larger seedlings were attacked by "spot leaf" disease, which was partly checked by cutting off the affected leaves.

The bureau has started the propagation of quinine plants from cuttings, and indications show that this can be successfully done.

COOPERATIVE PLANTING

The bureau of forestry, besides the above projects, is also cooperating with the Osmeña waterworks in Cebu, the Singson waterworks in Vigan, the Uling-Naga Coal Co. in Naga, Cebu, and the Army authorities in Corregidor Island, Cavite Navy Yard, and Camp Stotsenberg in planting trees. Several private individuals and haciendas are also planting trees in cooperation with this bureau.

FOREST DISTRICTS

The reports, as a whole, received from the 14 forest districts show satisfactory results of the administration and the handling of the work of the bureau throughout the Philippine Islands. Lumbering activities in most of the districts exceeded those of last year. Many of the small licensees have requested for additional amounts of timber to be cut from the public forests.

In Tayabas, competition among sawmill operators and small licensees in so far as the cost of logging and marketing is concerned, was very keen.

In eastern Visayas, the system of logging throughout the district remained unimproved during the year. There was, however, a marked activity of the lumber companies and licensees due to increased demand of timber for local markets and to the 21 sawmills in operation. Four new sawmills were established during the year, and in the district there are now 21 sawmills compared to 17 of last year.

The forest conditions in the district were disturbed by the typhoon which occurred in the latter part of November. The forest located on the southwest and south exposures suffered severely and many of the trees were broken, split and became stag-headed, rendering them susceptible to fires on account of dried litter.

The lumber companies in western Visayas, particularly in Negros, had a marked increase in the volume of output due to additional equipment and other improvements introduced in their operations. The small timber licensees were also active in cutting first and second group timber. This is specially true of molave and asalit which are sold as crossties to the sugar centrals most of which are located in Occidental Negros.

The lumbering activity in Palawan has remained the same as in the past year. This was due to lack of transportation facilities, scarcity of laborers, small local demand for lumber, and the lack of working capital for the licensees.

The lumber business in Mindanao as a whole showed a marked improvement over that of last year, both in output and investment. The forest products in that region, besides supplying local demands, are also exported to foreign countries.

Improvements of various kinds are steadily made with a view to increasing production, both in the mills and in the woods. New logging camps are established and new equipments are sought.

The licensees who collect minor forest products have, as a whole throughout the islands, increased their production.

BUREAU OF LANDS

ADMINISTRATION AND PERSONNEL

Personnel.—In 1928 there were 1,242 employees on the pay roll of this bureau, of which 770 were in the permanent service and 572 in the temporary service, as against 1,188 employed in 1927, of which 708 were permanent and 480 temporary. These figures do not include the skilled, semiskilled, and common laborers employed in various survey parties in the islands.

Appropriation.—The amount appropriated for the bureau of lands for the year 1928 was ₱1,620 less than that appropriated for the year 1927, the amount set aside for the former being ₱1,449,365 and for the latter ₱1,450,985.

The receipts derived by the bureau from various sources in 1928 amounted to ₱732,315.84 as against ₱665,415.11 derived in 1927 or an increase of ₱66,900.73.

The expenses incurred by the bureau in 1928 including disbursements from the cadastral revolving fund were ₱20,451.86 more than those incurred in 1927, ₱1,770,863.63 having been spent during the year 1928, as against ₱1,750,411.77 spent in 1927.

The following table shows the per capita receipts and expenditures of the bureau of lands during the years 1927 and 1928 on the basis of the estimated population of the Philippines during those years:

Fiscal years	Total receipts	Receipts per capita	Total expenditures	Expenditures per capita	Estimated population
1927.....	₱665, 415. 11	₱0. 05377058	₱1, 750, 411. 77	₱0. 14144651	12, 375, 079
1928.....	732, 315. 84	. 06147113	1, 770, 863. 63	. 14864759	111, 913. 167

¹ Bureau of health estimate.

Records and mailing work.—To show the increasing necessity of this bureau being provided with adequate space for housing its growing records and other valuable documents, there are given below the various kinds of records kept in this office, as of December 31, 1928:

Judicial records.....	57, 286
Public lands records.....	221, 572
Forfeited land records.....	123, 970
General records.....	36, 039
Personal records.....	4, 358
Spanish land records which will be eventually transferred to the records room.....	25, 417
Total.....	468, 642

Correspondence.—During the year 1928 there were received in this office through the mails 106,707 letters, as against 91,899 received during 1927, and there were released in 1928, 300,684 correspondence as against 237,128 sent out in 1927. The tremendous volume of correspondence handled by this bureau, as shown in the above-quoted figures, is an indication of unusual interest taken by the people of these islands in the acquisition of public lands.

ADMINISTRATION OF PUBLIC LANDS

Reorganization of the public lands division.—Two of the most important activities undertaken by the bureau during the latter part of the year in connection with the disposition of public lands were the reorganization of the

office force of the public lands division and the planning of a drive to clean up districts heavily congested with pending investigation orders. The innovations are still under trial and if the output of the work resulting from the experiment would justify the effort spent and the expense incurred, the same will be allowed to continue until the need thereof has ceased. There is, however, no doubt but that the work turned out by the public lands division as a result of these innovations, if continued at the present rate, would triple that of the year 1927.

Public lands concessions.—During the year 1928 there were approved 6,092 homestead applications covering an area of 86,365.8917 hectares as against 3,752 applications approved in 1927 covering an area of 54,831.3339 hectares. In 1928 there were issued 1,171 homestead patents involving an area of 13,668.4114 hectares, as against 896 homestead patents involving an area of 10,465.6405 hectares issued in 1927.

An increase of 263 per cent in the number of the free patent applications approved in 1928 is noticed over that approved in 1927, there having been issued during the latter year 88 patents only as against 230 in 1928; while an increase of 100 per cent is noticed in the number of free patent applications received in 1928 over those received in 1927, there having been submitted to the bureau during the former 1,564 applications covering an area of 5,697.4333 hectares, and during the latter 677 applications covering 2,854.0610 hectares.

There was a total of 15,140 public lands applications recorded in 1928 as against 19,050 applications recorded in 1927. The decrease noted in the number of applications recorded in 1928 is not indicative of the waning interest in the acquisition of public lands but it was the result of the promulgation of Bulletin No. 2-1 of the bureau which took effect on the 1st day of January, 1928. In accordance with this bulletin, applications for public lands not yet classified and certified to the bureau of lands as not needed for forest purposes, except those filed under the free patent provisions of the public land act and those for residential, industrial, or commercial purposes, were returned to the applicants unrecorded even if such lands were located in regions declared opened to disposition by the Governor General of the Philippine Islands. The promulgation of Bulletin No. 2-1 was prompted by the desire of the bureau not to overstock its record with a big number of applications which can not be approved promptly, as individual certification from the bureau of forestry with respect to agricultural fitness of the land is necessary before entry can be allowed thereon. This regulation is also intended to prevent trouble between ignorant public lands applicants, who consider the acknowledgment of receipt of their applications as authority for them to enter upon the land which has not yet been certified.

Investigation orders.—During the year 1928 there were issued 20,543 field investigation orders in connection with the various public-lands applications received in the bureau, as against 15,602 similar orders issued in 1927.

Malibay subdivision.—The Malibay estate was sold by public sale despite the strong opposition of certain influential residents of the estate and other interested parties who made the public believe that the subdivision did not belong to the insular government. As a result of this opposition numerous petitions were received in the bureau of lands requesting issuance of free patents for occupants within the estate, which petitions had been invariably denied. In order to acquaint the public of the real situation the bureau had to send some of its officers to Malibay for the purpose of holding public meetings and informing the people of the manner by which they could perfect their titles to the land. Despite this friendly attitude on the part of the bureau an effort was made to block the sale through the courts. On the morning of the day set for the sale a writ of injunction was received from the court of first instance of Rizal enjoining the director of lands from proceeding with the sale. This injunction, however, was finally quashed through the failure of the petitioners to support their claims. As a result all of the lots comprised within the Malibay estate subdivision, except 25, were sold at prices ranging from ₱0.08 to ₱2.08 per square meter.

MINING AND MINERAL LANDS

Mining activities in general.—During the year 1928 there was greater movement and interest manifested in the mining industry of the Philippines. More mining locations involving greater area in both lode and placer claims were

staked out in 1928 than in any of the last four preceding years. There were also more lode patents granted during the year than in any other year since 1910. This increase in the number of mining locations staked out and in the activities of mining operations on the different claims, especially in the Benguet mineral-land district, was reflected in the stock market, mining shares being very active throughout the year.

The Benguet mineral-land district.—As in previous years the Benguet mineral-land district was the center of the greatest activities and development during 1928. The Benguet Consolidated Mining Co. has completed during the year the Colbath drain tunnel at a total cost of about one-half million pesos. The power plant at Agno is almost complete and will be in operation about the middle of next year. The ordinary operations of the company showed greater progress than those of last year (1927), the increase in production being about 25 per cent.

The Balatoc Mining Co. has installed its mill, which will begin operation in January, next year. This mill and the mine development have cost the company about a million pesos during the year.

The Itogon Mining Co. is showing progress in its operation of the mines. A bigger mill has been installed during the year.

The Gold Hill Mining Association has driven 2 lower tunnels about 600 feet long, built a decent camp, and constructed about 200 meters of roads and trails. It has spent for mine development about ₱20,000 during the year.

In general, the mining industry in the Benguet region is very flourishing. On the other hand, there is not much activity in the Suyo-Mankayan region on account of the low price of copper.

Mineral lands surveys.—There were more mineral land surveys executed in 1928 than in 1927 both in number and area, there having been executed during the former year 17 mineral land surveys, covering an area of 149 hectares, as against 48 surveys executed in 1928, covering an area of 442 hectares.

Disposal of mineral lands.—There were 702 various mineral land concessions standing by December 31, 1928, covering an area of 10,168,1776 hectares, as against 690 concessions granted in 1927 covering an area of 10,906,3552 hectares. Although there was an increase in the number of concessions granted in 1928, a slight decrease was noted in the total area covered thereby. This is explained by the fact that in 1928 there were 13 new lode patents and 2 revocable permits granted, and 3 coal leases, covering an area of 856 hectares, canceled.

SURVEYS

Isolated and miscellaneous surveys.—There was a slight increase in the number of isolated land surveys completed in the field during 1928, over these completed during 1927, the increase being 18 surveys only. An increase in the number of surveys canceled may also be noted, there being 195 more surveys canceled in 1928 than those canceled in 1927. The number of isolated land surveys pending as of December 31, 1928, is 5,496, as against 2,513 standing on December 31, 1927. In order to clearly illustrate the status of the different isolated land surveys ordered, completed, and canceled during the years 1927 and 1928, the following tables are given:

Surveys	On hand Jan. 1	Ordered	Com- pleted	Canceled	Dec. 31
1927					
Private lands.....	138	81	98	3	118
Public lands.....	2,854	1,092	1,954	3	1,989
Miscellaneous.....	356	512	455	7	406
Total.....	3,348	1,685	2,507	13	2,513
1928					
Private lands.....	118	147	158	-----	107
Public lands.....	1,989	4,919	1,782	158	4,999
Miscellaneous.....	406	632	585	50	390
Total.....	2,513	5,698	2,525	208	5,496

Aside from the 2,525 isolated and miscellaneous surveys executed by public lands surveyors in 1928, there were also submitted for verification and approval 6,625 similar surveys during the year by private land surveyors.

The total number of lots and area finally completed during the year 1928 is greater than that finally completed during the year 1927, as shown by the following data:

Land surveys	Number of surveys	Number of parcels	Area in hectares
1927			
Private lands ¹	3, 585	11, 813	47, 074. 71
Do. ²	168	453	4, 621. 68
Public lands.....	1, 210	1, 502	25, 012. 97
Miscellaneous.....	756	1, 424	21, 314. 66
Total.....	5, 719	15, 192	98, 024. 02
1928			
Private lands ¹	4, 772	19, 376	79, 889. 16
Do. ²	105	201	1, 533. 35
Public lands.....	1, 234	1, 459	31, 135. 43
Miscellaneous.....	723	1, 912	40, 581. 53
Total.....	6, 834	22, 948	153, 139. 47

¹ Surveyed by private-land surveyors.

² Surveyed by public-land surveyors.

The increase in the quantity of work finally completed during 1928 as compared with 1927 accomplishments amounts to 7,756 parcels comprising 55,115 hectares. This increase represents an improvement of 51.1 per cent in the number of parcels and of 56 per cent in the area, or an average relative improvement of 53.6 per cent in favor of the year 1928 when compared with the accomplishments of the year 1927.

CADASTRAL SURVEYS

Cadastral surveys authorized.—During the year 1928 the Governor General authorized the cadastral surveys of 15 municipalities in different Provinces of the islands. Of this number eight were inaugurated during the year by the bureau of lands and three by private cadastral-land surveyors under Acts Nos. 3327 and 3240.

Cadastral projects in progress.—On December 31, 1928, there were in progress 41 cadastral projects authorized under different acts involving approximately 288,546 lots, with an aggregate area of 833,673 hectares, as against 46 in progress in 1927 involving approximately 314,366 lots with a total area of 731,758 hectares. Summarizing, the cadastral projects in progress in the field at the end of the year covered by this report are as follows:

Under act	Approximate		Sketched		Surveyed	
	Number of lots	Area in hectares	Number of lots	Area in hectares	Number of lots	Area in hectares
2259.....	193, 538	654, 558	142, 430	344, 752	90, 881	185, 205
2874.....	1, 250	25, 000	230	3, 700	.....	.....
2989.....	11, 639	5, 500	.....	.....	.....	.....
3240.....	329	18	329	18	329	18
3327.....	80, 790	148, 597	55, 195	78, 005	38, 967	50, 635
Total.....	287, 546	833, 673	198, 184	426, 475	180, 177	235, 853

Cadastral surveys completed in the field.—The total number of cadastral surveys completed during the year 1928 consists of 23 projects involving 107,285 lots, with a total area of 225,341 hectares.

Cadastral projects undertaken by private enterprises.—During the year 1928 there were three cadastral undertaken by private cadastral-land surveyors. On

account of the passage of Act No. 3452 increasing the cadastral survey-loan fund to ₱500,000, it is expected that more private cadastral-land surveyors and corporations will be induced to undertake private cadastral-land surveys, and thus hasten the early realization of the purpose of the government in bringing all lands in the Philippine Islands under the Torrens system.

Cadastral revolving fund.—The balance sheets for the year ending December 31, 1928, of the cadastral revolving fund shows a total asset amounting to ₱1,125,021.84, consisting of the following:

Current assets.....	₱530, 846. 56
Fiduciary assets.....	88, 345. 55
Deferred charges.....	404, 635. 22
Fixed assets.....	101, 194. 51
Total.....	1, 125, 021. 84

Cadastral survey maps and computations.—There were more cadastral maps and cadastral-survey computations completed during the year 1928 than those completed during the year 1927, as may be seen from the following tables:

Cadastral survey computations

Year	Number of cases	Number of lots	Area in hectares
1927.....	59	47, 203	99, 464
1928.....	77	64, 816	311, 358

Cadastral survey maps

Year	Number of cases	Number of lots	Area in hectares
1927.....	47	35, 511	62, 640
1928.....	61	50, 093	275, 319

Actual labor expenses for cadastral projects.—The actual expenses incurred for labor in connection with the execution of cadastral projects during the year 1928 amounted to ₱236,236.36, as against ₱268,378.39 incurred in 1927.

ADMINISTRATIVE SETTLEMENT OF CONFLICTS, LAND REGISTRATION, AND OTHER LEGAL WORK

CLAIMS AND CONFLICTS

Orders of investigation and reinvestigation.—The following table shows the total number of orders of investigation and reinvestigation issued during the years 1927 and 1928, as well as that of reports returned for being defective or incomplete:

	Number
1927.....	2, 534
1928.....	2, 404

Disposition of claims and conflicts.—In comparison with the 956 decisions promulgated during the year 1927, in which there were involved 980 claims of private persons and 1,574 public-land applications, the bureau rendered, during the year 1928, 1,033 decisions, involving 947 claims of private persons and 1,676 public-land applications. In other words, there were decided in 1928, 77 cases more than in 1927.

Disposition of motions or petitions for reconsideration.—The number of orders granting or denying requests for reconsideration as well as that suspending the effects of decisions and executing such decisions during the years 1927 and 1928 is shown in the following table:

Orders	1927	1928
Orders suspending effects of decisions.....	73	67
Orders granting requests for reconsideration of decisions and ordering investigations.....	22	25
Orders dismissing requests for reconsideration of decisions.....	93	130
Orders of execution of decisions.....	17	26

Appeals to the department.—The number of cases appealed to the department head in 1928, as compared with that of 1927, is shown in the following table:

Year	Number of cases either affirmed or left intact	Number of cases remanded	Number of cases reversed	Number of cases modified	Total
1927.....	62	—	2	8	72
1928.....	69	6	3	1	79

LAND REGISTRATION

Cadastral cases filed during the year 1928.—Compared with the year 1927 the total number of cases filed during the year 1928 with the corresponding total number of lots and areas is shown in the following table:

Year 1927:

Cases.....	47
Lots.....	35, 511
Area in hectares.....	62, 640

Year 1928;

Cases.....	60
Lots.....	49, 819
Area in hectares.....	275, 055

Cases filed and decreed for the last 10 years.—There were filed for the last 10 years 584 cadastral cases involving 507,488 lots with an area of 1,967,543 hectares, of which the courts were able to dispose during the corresponding period only 291 cases, involving 251,877 lots, with an aggregate area of 1,007,066 hectares.

The following comparative table shows the number of cases filed and decreed each year for the last 10 years, with their corresponding number of lots and areas:

Year	Number of cases		Lots involved		Area embraced	
	Filed	Decreed	Filed	Decreed	Filed	Decreed
1919.....	20	14	13, 063	10, 257	64, 752	53, 783
1920.....	49	30	36, 249	25, 994	89, 595	46, 107
1921.....	121	14	112, 361	9, 333	401, 987	36, 402
1922.....	67	28	82, 274	21, 746	230, 160	154, 506
1923.....	65	25	66, 904	14, 351	380, 021	123, 179
1924.....	68	14	48, 274	11, 928	188, 662	24, 283
1925.....	43	72	29, 176	78, 706	126, 850	228, 042
1926.....	44	20	33, 857	15, 977	147, 821	164, 823
1927.....	47	47	35, 511	41, 750	62, 640	94, 284
1928.....	60	27	49, 819	21, 835	275, 055	81, 557
Total.....	584	291	507, 488	251, 877	1, 967, 543	1, 006, 966

There were pending in court on December 31, 1928, 293 cadastral cases involving 256,411 lots, with a total area of 960,577 hectares. With the appointment of 10 additional auxiliary judges of courts of first instance to take care of land-registration cases, it is expected that the cadastral cases which have accumulated for the last 10 years would be soon cleaned up.

FRIAR LANDS AND SAN LAZARO ESTATES

FRIAR LANDS

Appropriation.—The amount authorized for the operation of the activities of the friar-lands estates was ₱73,500.68 less than that appropriated in 1927. This decrease in appropriation was made possible by the gradual reduction of the estates through their sale, which necessarily entailed a corresponding reduction in administration expenses. A comparative statement of the per capita receipts and expenditures of the friar-lands estates for the years 1927 and 1928, on the basis of the estimated population of the Philippines during those years, is shown in the following table:

Fiscal year	Total receipts	Receipts per capita	Total expenditures	Expenditures per capita	Population
1927-----	₱950, 293. 74	₱0. 07679092	₱244, 123. 70	₱0. 01972706	12, 375, 079
1928-----	808, 406. 88	. 06786600	174, 195. 60	. 01462210	11, 913, 167

DISPOSITION OF FRIAR LANDS

Sales of vacant lots.—There were less vacant lots sold in 1928 than in 1927, as shown in the following tabulated statement:

Year	Number of lots	Area in hectares	Value
1927-----	446	1, 554. 5114	₱203, 149. 20
1928-----	303	3, 054. 6919	461, 762. 70

The decrease in the sale was due to the gradual exhaustion of choice lots, which were disposed of earlier on account of their favorable location and superiority of soil. It must be observed, however, that the area of lots sold in 1927 was one-half in extent of the lots sold in 1928, and that the purchase price per hectare of the lots sold in 1928 is ₱21 more than the purchase price per hectare of the lots sold in 1927.

Lands sold and fully paid up.—A comparison of the number of lots fully paid up each year for the last five years, showing the area in hectares and value of the lands sold, is shown in the following table:

Year	Number of lots	Area in hectares	Value
1924-----	936	733. 8024	₱153, 258. 60
1925-----	909	874. 3862	171, 166. 70
1926-----	1, 005	1, 580. 6207	210, 988. 62
1927-----	887	760. 9463	162, 389. 16
1928-----	1, 057	1, 578. 2046	319, 343. 34

Summarizing, the actual status of all the lands sold and unsold within the 23 friar lands estates at the close of the fiscal year 1928, is shown in the following table:

Disposition	Number of lots	Area in hectares	Value
1. Total of lands sold and fully paid up-----	24, 170	20, 178. 5585	₱2, 785, 206. 13
2. Total of lands sold and partially paid up-----	25, 248	109, 755. 2229	14, 998, 444. 97
3. Total of lands vacant and unsold-----	1, 935	23, 781. 4012	2, 232, 362. 00
4. Total of lands technically vacant and temporarily reserved for the Bureaus of Agriculture and Forestry-----		1, 054, 9961	1 46, 463. 00
Total-----	51, 353	154, 770. 1787	₱20, 062, 476. 10

These are included in (3) total of lands vacant and unsold.

As a result of the sales made, there still remain unsold 1,935 lots having an area of 23,781.4012 hectares, valued at ₱2,232,362, or 15.5 per cent of the total area of the entire friar lands estates.

COLLECTIONS

Sources of income.—The financial returns accruing to the credit of the friar lands sinking funds are largely derived from the sales of friar estate lots, interest on deferred payments, irrigation fees, and miscellaneous receipts. The total yearly collections from these different sources for the last five years are shown in the comparative table given below:

Year	Sale	Interest	Irrigation	Miscellaneous	Total
1924.....	₱740,815.56	₱237,360.35	₱1,922.26	₱3,284.14	₱983,382.31
1925.....	732,639.07	218,639.02	2,502.01	3,347.02	957,217.12
1926.....	743,967.37	195,039.54	4,943.95	5,250.25	949,201.11
1927.....	736,515.50	186,027.92	5,955.33	4,560.03	933,058.78
1928.....	633,385.66	139,038.55	5,797.48	5,165.80	783,428.99

FRIAR LANDS INVESTMENT FUND

This fund was created on October 2, 1907, under Act No. 1736 and originally amounted to ₱100,000. It constitutes the original operating capital from which loans may be granted friar lands estate holders on sufficient real-estate securities at interest rates ranging from 7 to 9 per cent per annum. As a result of the loans made, the original capital has grown to ₱334,759.93 through the accumulation of interests earned during the period that the fund has been in operation.

SAN LAZARO ESTATE

Appropriation.—The amount authorized for the operation of the activities of the San Lazaro estate for the year 1928 was ₱7,290, of which amount ₱4,862.43 was used in the payment of salaries, purchase of equipment, and for miscellaneous expenses. The surplus, amounting to ₱2,427.57, will automatically revert to the general leprosy funds of the insular government.

Disposition of the San Lazaro estate.—Since the year 1922 all of the lots within the San Lazaro estate have already been disposed of, and the work of the bureau in connection therewith concerns merely with the collection of installments due, the issuance of deeds of conveyance for fully paid up lots, and administration of the San Lazaro estate funds.

The actual status of the San Lazaro estate is shown in the following table:

Disposition	Area in square miles	Value
Total occupied lands with contracts.....	612,980	₱2,074,079.82
Total occupied lands without contracts.....	456,018	1,573,216.00
Vacant lot in front of Bilibid Prison.....	690.3	4,633.80
Total.....	1,069,688.3	3,651,929.62

San Lazaro investment fund.—Under act No. 2478, the San Lazaro investment fund was created with a working capital originating from receipts on sales of the lands within the San Lazaro estate for loan purposes. The transactions of the San Lazaro investment fund during the fiscal year 1928, are shown in the following itemized statement:

Disposition	Number of contracts	Amount
Operating capital January 1, 1928.....		P1, 777, 988. 17
Less outstanding loans January 1, 1928.....	494	1, 763, 777. 19
Balance available for loans January 1, 1928.....		14, 210. 98
Total collections on installments on sales of lands during 1928.....	839	55, 785. 72
Total collections on loans during 1928.....	74	458, 817. 88
Total funds available for loans during 1928.....		528, 814. 58
Less total disbursements for new loans granted during 1928.....	108	486, 513. 70
Balance available for operation December 31, 1928.....		42, 300. 88
Total outstanding loans collectible, December 31, 1928.....	528	1, 791, 473. 01
Total operating capital of the San Lazaro investment fund December 31, 1928.....		1, 833, 773. 89
Total applications pending December 31, 1928.....		
Total old loans renewed during 1928.....	41	453, 600. 00

BUREAU OF SCIENCE

PERSONNEL

The great increase in the demand for work by other government entities and by private individuals and the enlargement of the activities of the bureau has necessitated an increase of 22 in the number of personnel. The total number of employees on the pay roll as of December 31, 1928, was 345. Of these, 128 composed the technical staff, 34 were clerical, while 183 were laborers, including janitors, carpenters, gardeners, watchmen, helpers, and others.

FINANCIAL STATEMENT

Expenditures, income, and free work.—The expenditures for the year 1928 were P714,310.21, as against P722,556.10 for the year 1927, or a decrease of P8,245.89. The cash income amounted to P388,269.92, as compared with P391,079.99 for the previous year, or a decrease of P2,810.07. The income for 1928 was larger than for any previous year except for 1927. The decrease in the income for 1928 is less than the value of items for which charges were formerly made but which were put on the free list during the year.

The free work done for other government entities would have had a cash value of P1,815,249.72, according to the bureau of science schedule of charges. The cash income and the value of free work amounted to P2,203,519.64. Subtracting from this the total expenditures of the bureau leaves a balance of P1,489,209.43, which represents the actual profit to the government of operating the bureau of science. The actual cost to the government is the amount expended, P714,310.21, minus the total income, P388,269.92, which leaves P326,040.29; for which the bureau did P1,815,249.72 of free work for government entities, or P5.57 worth of free work for each peso expended. The free work mentioned above includes only the actual tests and examinations made and supplies furnished to other government entities and does not take account of the examinations made free for the public or the fact that a considerable proportion of the funds of the bureau of science is expended in ways that are of direct value to the people of the Philippine Islands and for which no charge can be calculated. Among such items are the expenditures for the development of home canning and food preservation, for the development of the fisheries industries, for free laboratory medical examinations, for the prevention of rabies; for the identification of minerals, plants, and animals, and for consultations in regard to various industries. Neither does it take into account the large amount of research which is of advantage to the public, including such activities as geological and soil surveys, the study of plant diseases, the study of the medicinal constituents of Philippine plants; the cause, cure, and prevention of human diseases, and the commercial uses of various Philippine products.

ACTIVITIES

Routine.—The amount of routine work done by the bureau has been steadily and rapidly increasing for several years. This is due to a considerable extent to the increased appreciation of the work of the bureau of science by other government entities and by the public. The amount of routine work done at present not only exceeds that of any past period but it is done in a more accurate and satisfactory manner than at any previous time since the bureau was established. The bureau of science works and manufactures supplies, mostly free of cost, for practically all insular government entities. Brief mention is made below of some of the large items for various entities.

a. Philippine health service.—The bureau of science manufactures vaccines and serums in large quantities for the Philippine health service. The bureau of science sold to the Philippine health service 1,184,690 doses of vaccines for cholera, typhoid, and combined cholera, typhoid, and dysentery, and 3,350,000 doses of smallpox vaccine, and furnished free of cost 2,548,790 units of vaccine for cholera, typhoid, combined cholera and typhoid, and dysentery. In addition considerable amounts of other products were either sold or furnished free to the Philippine health service. Although there were no epidemics during the year, the Philippine health service took larger amounts of vaccines and serums than in the previous year.

The bureau of science serves as a laboratory for the Philippine health service. During the year there were examined free for the health service 38,000 samples of feces; 8,879 samples of foods, alcohols, and beverages; 5,200 samples of water; and 50,924 rats for plague. In all, free examinations for the Philippine health service were made on 108,802 specimens.

The enforcement of the pure food law is in the hands of the Philippine health service, and all analyses and examinations made in connection with the enforcement of this law are conducted by the bureau of science for the Philippine health service.

b. Public welfare commissioner.—The office of the public welfare commissioner was furnished free with 51,893 bottles of tikitiki extract for the cure of beriberi. These had a sales value of ₱36,325.

c. Bureau of quarantine service.—The samples collected by the bureau of quarantine service are sent to the bureau of science for analysis. More than 10,600 free examinations for that service were made during 1928.

d. Board of pharmaceutical examiners and inspectors.—The bureau of science serves as a laboratory for the board of pharmaceutical examiners and inspectors and makes all analyses for them in connection with the enforcement of the drug law.

e. Bureau of supply.—The bureau of supply buys many articles on specifications, and these articles are tested by the bureau of science. During 1928 more than 13,759 such examinations were made without charge from the bureau of supply.

In addition to making examinations for the bureau of supply, the bureau of science spent a great deal of time on the formulation of specifications to be used by the bureau of supply in the purchase of materials. During the year the chief work along this line was the preparation by the government committee on standardization of supplies. These specifications have already saved the government a great deal of money.

f. Bureau of public works.—The bureau of science examined, free of charge, all samples of cement, concrete, and artesian-well water for the insular projects of the bureau of public works. During 1928 about 18,000 such free examinations were made. Also a large number of samples were submitted by the bureau of public works for analysis or test for provincial or municipal projects.

Research.—The important research done by the Army Medical Research Board, and that in connection with the Rockefeller Foundation, and the Manila Railroad are mentioned under the heading of cooperative activities.

The greatly increased appreciation of the routine work of the bureau by government entities and the public greatly increased the demand on the time of its technical staff for the performance of routine work. In spite of the demand of routine, emphasis has been laid on research and the accomplishments along this line may be considered significant. The most outstanding accomplishments along research lines are the following:

Medical biology.—The experiments on yaws and syphilis added greatly to the knowledge of the cause and treatment of these diseases. A vaccine has been developed which not only gives monkeys lifelong immunity to yaws but also

immunizes them against syphilis. There are indications that it may be practical to improve this vaccine and immunize men against both yaws and syphilis and thus greatly minimize the incidence of these diseases. Also, it is indicated that it may be possible to treat cases of syphilis with the vaccine and prevent the occurrence of the late distressing nervous manifestations. This line of work, which is a continuation of the work on the etiology, clinical manifestations, and immunity of yaws, is one of the greatest contributions ever made by the bureau of science to medicine.

A method has been devised for the purification and concentration under tropical conditions of serums against tetanus, diphtheria, and dysentery. This improvement will greatly reduce the discomforts of patients and increase the popularity of these serums.

Botany.—Chemical, morphological, and pharmacological studies were completed of 15 different species of medicinal plants.

Plant pathology and mycology.—A study was completed on the cause and control of a very severe die-back disease of cacao. This disease is so serious that it prevents the profitable cultivation of cacao in many parts of the Philippine Islands. However, it can be controlled by proper cultivation and eradicated by pruning and spraying.

In cooperation with the bureau of agriculture considerable progress has been made on the study of the stem-rot disease of rice, which is the most serious disease of this plant in the Philippine Islands.

Considerable progress has been made in studying and determining the fungi that are responsible for the decay both of standing trees and lumber.

Fisheries.—Considerable progress has been made in monographing several families of fishes.

Studies have also been conducted on the crustacea of the Philippines.

In cooperation with the bureau of forestry studies have been made on the marine woodborers at the mouth of the Pasig River.

Organic chemistry.—A considerable number of new compounds were made from the acids of chaulmoogra oil in the hope of finding one which will be more efficacious than chaulmoogra oil in the treatment of leprosy.

Coconut oil which was absolutely water white and acid free was made from clean copra. The copra cake was then made into a pure white, fine grained, agreeable tasting flour which is suitable for human consumption. This flour has proved to be particularly good for the making of cakes. This work may lead to the adoption of higher standards for coconut oil and more profitable use of copra cake.

The chemical composition of Philippine bagasse was determined.

A number of pure starches were prepared from Philippine tubers.

The vitamin contents of a number of Philippine fruits and vegetables were determined.

The microchemical composition and food value of a large number of wild food plants were determined.

General, inorganic, and physical chemistry.—A great deal of progress has been made in the preparation of standard specifications for the use of the bureau of supply and other government entities. Particularly important has been the preparation of very complete standards for paints.

The amount of paper pulp that can be obtained from a given area of cogon land was determined. Rice straw was found to be more suitable than cogon for paper pulp.

High-grade vitrified products such as sewer pipes, bricks, and porcelain have been prepared from Philippine clays.

A laboratory method for determining the wearing quality of paint has been perfected.

A refined method for determining the alkalinity of Philippine limes has been developed.

It was found that practically all artesian-well waters of Manila and vicinity contain appreciable amounts of radioactive material.

Considerable progress has been made in the study of the mechanical properties of Philippine woods, particular attention having been paid to the nail-and-spike-holding power of various woods, including those treated with preservatives. The results will be useful to those employing railroad ties and also to those using wood for building purposes.

Soils and fertilizers.—Field work on a soil survey of Albay Province has been completed, and considerable work has been done on the soils of Sorsogon and Camarines Sur.

Geology and mines.—Considerable progress has been made on an extensive study of the geology and mineral resources of Zambales range, which is one of the least-known mineral districts. Results have also been obtained from studies on systematic paleontology and stratification, coral reefs, and coral resources.

Home canning and food preservation.—The demonstration of methods of preserving and canning Philippine fruits and vegetables has been continued with excellent results. The demonstrations having been popular both in Manila and the Provinces. During the year demonstrations were given in 47 towns in 11 Provinces.

The demonstrators in addition to doing demonstration work in provincial towns have also collected Filipino recipes for cooking, 292 such recipes having been tried in the laboratory. The best of these, together with foreign recipes suitable or modified to be made suitable for the Philippines, will be printed in the form of a cookbook which will be used by the demonstrators for the instruction of the public.

Publications and library.—The Philippine Journal of Science, embodying the results of the research work of the bureau, was issued in three volumes with an aggregate of 1,417 pages, 183 plates, and 51 text figures.

The Philippine Journal of Science is sent to 945 paid subscribers and exchanges, and 102 copies thereof are distributed free for review to associate editors and other parties. The total mailing list is 1,047. This is distributed as follows: Philippines, 94; remainder of Asia, 191; Europe, 301; North America, 351; South America, 27; Africa, 31; Australia and neighboring islands, 46. These figures show that the Journal is widely distributed to scientific institutions in all parts of the world.

Three monographs were issued during the year and one is in press.

The library has continued to grow in size and usefulness and has maintained its high standard of excellence. During the year, 1,595 bound volumes and 8,605 unbound volumes, parts, and pamphlets were added, making a total of 112,483 bound and unbound volumes, parts, and pamphlets at the close of the year. The library receives 2,234 scientific serials, of which 454 are paid subscriptions, 699 exchanges, and 1,081 free. The number of publications used and charged out was 58,158 or a daily average of 159 publications. The number of visitors recorded was 14,101.

Museum display.—The bureau of science is visited by a great many people who desire to know something of the scientific work of the bureau. Excursions of school children accompanied by teachers from Manila and neighboring Provinces frequently visit the bureau of science, so that during the course of the year many thousands of people pass through the bureau. In order to demonstrate the work of the bureau and to give instruction to these people, the bureau has installed a series of cases in the corridors on the first floor in which there are displayed collections of birds, fishes, insects, shells, corals, sponges, and other animals, as well as plants and plant diseases. The cases also contain exhibits illustrating the work of the bureau and products manufactured by the bureau. This exhibition has proved very popular and has attracted an increased number of visitors.

COOPERATIVE ACTIVITIES

United States Army Medical Department Research Board.—As in the past the United States Army Medical Department Research Board occupied quarters in the bureau of science. Cooperation with the board has been a great help to the bureau of science and the results of the board's work are of value not only to the bureau but to the Philippines at large.

Field work was carried on in connection with surveys for malaria carriers among the Filipino population of Corregidor and for *Anopheles* mosquitoes breeding there and elsewhere. For the first time it was ascertained that *Anopheles minimus*, which is the only known carrier of malaria in the Philippines, breeds in considerable numbers on Corregidor Island. The source of infection having thus been discovered, it may be possible to prevent further contraction of malaria by troops living at Corregidor.

Colonel Vedder made a study of the lepers segregated in the Philippines during the past 20 years and conducted experiments to see whether mosquitoes transmit leprosy from a leper to a healthy person. The results have been published in the Philippine Journal of Science. Colonel Vedder also finished

his investigative work to determine a satisfactory standard for beriberi-preventing rice. The results have been published in the Philippine Journal of Science.

Major Kelser finished his work on an improved vaccine for immunizing against rinderpest and the results were published in the Philippine Journal of Science. The vaccine developed by Major Kelser can be used as soon as prepared instead of having to be aged like the old vaccine, is more active than the old vaccine, and has excellent keeping qualities, whereas the time during which the old vaccine was potent was both very short and variable. The new type of vaccine is now used by the bureau of agriculture and a 1-injection method of immunizing has been developed.

Experiments on the chemotherapy of equine epizootic lymphangitis were conducted by Major Kelser. His best results were obtained with mercuric iodide.

Rockefeller Foundation.—Dr. Earle B. McKinley, who was stationed by the Rockefeller Foundation in the bureau of science, left about the middle of the year to become director of the school of tropical medicine of Columbia University at San Juan, P. R. Before leaving he finished several articles. His largest work was the completion of a treatise on filterable virus diseases of man, mammals, fowls, insects, fishes, and plants.

Manila Railroad.—As during the past three years, the cooperation work with the Manila Railroad has been conducted by Dr. T. Dar Juan, who has been stationed in the bureau of science. The investigation work is primarily along lines which are of interest to the railroad but are also of great value to the government.

Particular attention has been paid to the study of the behavior of various oils, pigments, and thinners on exposure so as to determine which paints are most serviceable for various purposes. The results of this work have been not only of value in the preparation of paint specifications for the Manila Railroad but have been combined with further work, with the result that the committee on standardization of supplies for the Philippine government has been able to adopt very complete specifications for paints for government use. These specifications, together with discussions on the relative values of various paint materials and methods of painting will be issued as a popular bulletin by the bureau of science. In this way the results of this work will be available not only to government officials but to the public as well. The research along this line has already saved the Manila Railroad and the Philippine government considerable sums of money and is an excellent example of the value of cooperative effort.

Metropolitan water district.—As in past years the metropolitan water district has supplied a chemist particularly for the chemical examination of the water of Manila. This chemist makes several determinations daily of the chlorine content of the city water, while a bacteriologist of the bureau of science examines the water several times each day for bacterial content. The results of these examinations are highly satisfactory and indicate that the city water, as it comes from the tap, is safe for drinking and other domestic purposes.

WEATHER BUREAU

There had been only nine well-developed typhoons near or over the Philippines during the year. Only six, however, had the center over the islands, and no more than two were remarkable typhoons, one of them being the famous Euskadi typhoon, which is considered one of the most destructive baguios we have experienced in recent years. It wrought great havoc over the central part of the Philippines on November 23 and 24.

Due to the influence of this typhoon, great floods were observed in northeastern Luzon, the worst experienced there during the last 15 years.

There was lack of rain for some months in several Provinces, but taking into consideration the whole year the total amount of rainfall was generally above the normal with the exception of some stations in western Luzon and southern Mindanao.

The forecasting service was as efficient as in previous years, particularly during the November typhoon. The weather map was much improved with an increase of weather reports from foreign stations and from steamers.

Seismic activity was rather great in 1928 over several parts of the world. The Philippines got its share of three destructive earthquakes, which occurred in June and December, a total number of 113 lesser shocks, and 408 instrumental records. The destructive earthquakes caused damages in San Jose, Mindoro, on June 15; in Cotabato on December 19; and in Dumaguilas region on December 28.

Due to the proximity of the maximum of the sun-spot period, which seems to have been in its peak during this and the last year, magnetic activity was great in 1928. The number of fairly disturbed days was 274. All the months had some extraordinary disturbances. The greatest disturbances occurred in May, July, and October, during which months there were observed great displays of aurora and disturbances in the electric communications by cable and by wireless.

Time signals have been furnished for the telegraph and wireless stations of the islands practically as heretofore. Additional accuracy, however, has been secured, due to substantial improvements in standard clocks, transit, and radio equipment. The photographic registration of variations in potential gradient of atmospheric electricity has been continued, the causes of variation carefully studied, and the equipment enlarged and improved. The large equatorial has been thoroughly tested, especially the lens, and much time spent in endeavoring to find suitable astronomical problems adapted to the telescope and climate.

SPECIAL ACTIVITIES

RICE AND CORN FUND

(Act No. 2818, as amended by Act No. 3039)

Up to December 31, 1928, loans in the amount of ₱1,913,990 had been made, and 355 agricultural credit cooperative associations, distributed in 35 Provinces, received the benefits of this act. At the close of the year there were existing 550 associations, 223 of which were indebted from this special fund.

During the year, 147 associations liquidated their loans amounting to ₱512,000, including the corresponding interests, and at the close of business on December 31, 1928, the outstanding loans receivable totaled ₱672,544.87. Of this sum the amount of ₱232,836.50 represents the total overdue installments of principal. There are, besides, overdue interests amounting to ₱29,800.05.

At the close of the year the enterprise was worth ₱1,387,733.87, distributed as follows:

Assets and liabilities

Fixed assets:

Furniture and equipment (including the ₱343.96 from inter-bureau transfer)	₱2,451.19
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Liquid assets and deferred charges:

Cash, insular treasury	712,778.17
Loans receivable	672,544.87
Supplies and materials in stock	28.93

Total assets	1,387,803.16
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Liabilities:

Accrued leave payable	69.29
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Total assets, Dec. 31, 1928	1,387,733.87
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If the overdue interests of ₱29,800.05, which, of course, are sure money only that they have not yet been collected, are added to the above figures, the total assets would be ₱1,417,533.92. The enterprise is thus now worth ₱417,533.92 more than the original capital of ₱1,000,000, representing a net gain of 41.75 per cent in less than 10 years of operation. The 1928 expenses totaled ₱7,500.14, as against the average of ₱8,134.33 for all the nine previous years, exclusive of a small amount in cash for accrued leave earned by, and payable to, some of the employees. The percentage of expenses for the year 1928 represents only 16.80 per cent or one-sixth of the collected income in the sum of ₱44,641.27, and the net gain for the same period, exclusive of accounts receivable as overdue interests, was ₱37,141.13, as may be seen from the following operation account:

Operation:

Income collected, 6 per cent interest	₱44,641.27
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Less:

Salaries	₱6,578.06
Wages	237.50
Traveling expenses of personnel	72.00
Postal, telephone, telegraph, and cable services	104.00

Less—Continued.

Miscellaneous service.....	₱55.02
Consumption of supplies and materials.....	91.11
Maintenance and repair.....	31.70
Furniture and equipment.....	330.75
Total.....	₱7,500.14
Net gain for 1928.....	37,141.13

STOCK HERD PROMOTION FUND

(Act. No. 2758)

The work during the year in all the stock farms under operation has been on the whole satisfactory, there having been 612 births, with 48 deaths. The rate of birth in 1928 on the three farms averaged 53.70 per cent of the total adult females, while that of death was 0.85 per cent of the total number of animals.

PURCHASE AND SALE OF ANIMALS

Twenty head of grade cattle were purchased during the year for ₱1,250 and added to the herds at the Bongabong Stock Farm. One hundred and sixty-eight head (37 carabaos and 131 cattle), with a book value of ₱16,346.80, were sold during the same period for ₱12,603.25.

STATUS OF THE FUNDS, APPROPRIATED UNDER ACT 2758

During the year, the amount of ₱21,104.79 was expended, of which ₱17,721.47 was spent for salaries of personnel and wages of laborers, ₱2,133.32 for miscellaneous expenses, and ₱1,250 invested in the purchase of animals. The salaries of permanent employees amounted to ₱9,488.95 per year.

On December 31, 1928, the number of animals in all the stock farms was 3,476 heads of cattle and 334 carabaos valued at ₱275,054.38, which number does not include the 168 head sold during the year.

The total number of animals at each farm, including carabaos, cattle, and six horses is as follows:

Bongabong.....	1,536
Ubay.....	1,595
Dumarao.....	653
Alabang.....	32
Total.....	3,816

The Alabang Stock Farm belongs to the bureau of agriculture, and 32 animals under act No. 2758 are being kept there for experimental purposes.

The total assets at the close of the year, exclusive of the 612 young calves which have not yet been appraised and carried in the books for being less than one year of age was ₱327,466.41 as against ₱313,760.38 in 1927, or a net gain of ₱13,706.03, after deducting all expenses.

Statement of cash and fixed property

Balance of the appropriation of ₱400,000 on Dec. 31, 1928.....	₱46,976.42
Value of fixed property including animals and equipment on Dec. 31, 1928.....	280,489.99
Total assets, Dec. 31, 1928.....	327,466.41

AGRICULTURAL COLONIES

BOHOL AGRACULTURAL COLONY

Administration and present status.—At present the colony is under a superintendent who, since June, 1926, has been designated public lands inspector

and ex-officio superintendent of the colony. He is assisted by two employees and a messenger who also acts as janitor. For purposes of administration, the colony has been subdivided into 15 districts, each of which is under a "cabecilla," or foreman chosen from among the progressive and trustworthy colonists.

The colony covers an area of 2,528 hectares and is divided into 158 lots of 16 hectares each, all of which have been applied for and are under cultivation. The total area under cultivation during the year 1928, was 1,918 hectares or 23 hectares greater than the area cultivated in 1927. This increase in the cultivated area was made possible by the absence of locusts and the increase in the number of inhabitants, there being in the colony now 2,083 persons, as against the 2,009 it had in 1927.

Financial condition.—At the end of the year 1928, the total assets of the Bohol agricultural colony is ₱26,571.46 consisting of fixed property in the amount of ₱4,508.90, working assets in the amount of ₱1,571.27 and current assets in the amount of ₱20,491.29. Its total liabilities amount to ₱792.94 and the total surplus amounts to ₱25,778.72 consisting of working capital in the amount of ₱21,269.82 and of fixed equipment in the amount of ₱4,508.90.

ABULOG AGRICULTURAL COLONY.

Administration and present status.—Like the Bohol agricultural colony, the Abulog agricultural colony is directly supervised by a public lands inspector of the bureau of lands, who is at the same time ex-officio superintendent of the colony, assisted by two foremen and a clerk, all of whom are paid by the bureau of lands. The colony covers an area of 2,677 hectares and is divided into 168 lots, all of which, with the exception of a few, are already occupied by colonists. In contrast to the Bohol agricultural colony, not more than one-fifth of the whole area of this colony is under cultivation, due to lack of an irrigation system and to frequent ravages of locusts and other agricultural pests.

Financial condition.—The total assets of the Abulog agricultural colony amount to ₱57,174.37, consisting of fixed property in the amount of ₱1,587, working assets in the amount of ₱5,818.85, and current assets in the amount of ₱49,768.52. Its total liabilities amount to ₱1,596.12, and the total surplus of the colony is ₱55,578.85, consisting of fixed capital in the amount of ₱1,587, and current surplus in the amount of ₱53,991.25.

COTABATO AGRICULTURAL CONDITIONS

Administration and present conditions.—The administration of the Cotabato agricultural colonies is placed in the hands of the director, bureau of non-Christian tribes, as delegate of the secretary of agriculture and natural resources. The director of the bureau of non-Christian tribes acts through his representative, the provincial governor of Cotabato, who supervises the activities of the agricultural colonies which are under the immediate management of superintendents.

Conditions throughout the agricultural colonies located in the Cotabato Valley during the year 1928 were not very satisfactory, due to the occurrence of destructive floods at about the early part of the second quarter of the year and to the fact that the colonies were still feeling the effect of the Alangkát uprisings in 1927. There was noted therefore a decrease in the production of crops, by reason of which the collection of the colonists' indebtedness during the year was not as good as expected. In spite, however, of unfavorable conditions the colonists, numbering 7,977 at the end of the year, are taking greater interest in their agricultural work and in their economic improvement.

Financial statement.—The following balance sheet and statement of operations of the agricultural colonies show the comparative financial status for the years 1927 and 1928 of this insular enterprise:

Assets	1928	1927
Current assets:		
Cash in Treasury	P1, 557. 05	P81. 94
Accounts receivable—		
Colonists	368, 619. 93	373, 744. 55
Miscellaneous	2, 163. 84	752. 28
	372, 340. 82	374, 578. 77
Fixed assets:		
Colony buildings	2, 262. 51	8, 404. 13
Less depreciation	487. 53	1, 390. 71
	1, 774. 98	7, 013. 42
Equipment	11, 719. 61	12, 738. 84
Less depreciation	11, 515. 49	10, 109. 14
	204. 12	2, 629. 70
Total assets	374, 319. 92	384, 221. 89
Liabilities:		
Current liabilities—Accounts payable	4, 859. 52	6, 581. 82
Term liabilities—		
Loan payable to Province	36, 059. 04	36, 893. 26
Loan payable to insular government	135, 000. 00	135, 000. 00
	171, 059. 04	171, 893. 26
Deferred credits—Accrued interest	31, 531. 43	31, 531. 43
Capital investment—		
Act 2280	50, 000. 00	50, 000. 00
Act 2254	209, 883. 35	209, 883. 35
Losses to Dec. 31-28	(93, 013. 42)	(85, 667. 97)
	166, 869. 93	174, 215. 38
Total liabilities	374, 319. 92	384, 221. 89

Profit and loss statement

Rental of buildings	P97. 53	
Property found at station	154. 50	
	P252. 03	
Gross production earnings		P374.
Less:		
Production cost—		
Depreciation on buildings	903. 18	P420. 21
Depreciation on equipment	1, 406. 35	1, 528. 66
Transfers without cost—		
Buildings transferred to Province	3, 865. 39	
Buildings transferred to districts	2, 276. 23	
Bad debts—		
Colonists' debts remitted	952. 69	
	7, 597. 42	1, 945. 87
Net loss	7, 345. 45	1, 573. 97

FIBER STANDARDIZATION BOARD

(Established under act No. 3263)

Membership and personnel.—The fiber standardization board, which was created under act No. 3263, was in 1928 composed of the following members: Dr. Stanton Youngberg, director of agriculture, as chairman; Messrs. S. F. Gaches and Mariano de Garchitorena, producers; Mr. J. Camahort, dealer; Messrs. J. T. Knowles and L. L. Spellman, exporters; and Capt. H. L. Health, manufacturer. The board held during the year nine regularly convened meetings to transact business.

There were 73 men in the employ of the board, 49 of whom were in the inspection, and 24 in the administrative force, distributed among the 7 inspection stations that are operated in the different parts of the islands.

Inspection stations and grading-baling establishments.—The inspection stations maintained in 1928 are located in Manila, Cebu, Davao, Legaspi, Zamboanga, Casiguran, and Malitbog. Eighty-nine establishments for the grading and baling of fibers were in operation throughout the archipelago.

Scope of work and financial statement.—During the year 1,585,767 bales of all Philippine fibers with established grades were inspected, approved, and certified and 47,269 bales were rejected.

The amount collected as inspection fees and for grading permits was ₱266,290.49, while the total expenditures amounted to ₱160,187.06. At the close of business at the end of the year, there was a superavit of ₱77,882.63.

Agricultural aid.—Acting under section 1796-B of act No. 3263, the board released the sum of ₱45,000 out of the surplus of ₱71,968.57 for 1927 and turned it over to the director of agriculture for educational and research work so as to promote the Philippine hemp industry. This resulted in the transfer of four educational fiber inspectors to the bureau of agriculture, thereby relieving the Philippine fiber inspection service from its educational activities and enabling it to concentrate its efforts to inspection work.

Constitutionality of the fiber law.—Vital sections of the fiber grading law were held unconstitutional in a decision rendered by the court of first instance of Manila in the writ of mandamus filed by ex-senator Alegre against the insular collector of customs. Under this holding, a bale of fiber may be exported without previous inspection and certification by the fiber inspection service. To enforce the ruling of the court would be equivalent to setting at naught the very purpose for which the fiber law was created. The case is now on appeal in the supreme court of the Philippine Islands.

Supervision.—The fiber standardization board is a semi-independent organization placed under the nominal charge and supervision of the department of agriculture and natural resources. The general rules governing fiber classification are approved by the secretary of agriculture and natural resources, but all other matters, including expenditure of funds and appointment of personnel, are entirely outside the jurisdiction of this office. In other words, the department head is placed in the very anomalous and embarrassing position of having to assume responsibility for the fiber inspection and promotion work of the government without having any real authority over the service. This is a very undesirable situation, to say the least, and the undersigned believes that it should be remedied at the earliest opportunity by either making the secretary or undersecretary a member of the board, or by conferring upon the department head authority similar to that exercised by the secretary of finance over the tobacco inspection board, namely, the power to approve all resolutions of the board involving expenditure of funds. To this end, legislation embodying the views of the undersigned will be submitted to the Governor-General and the Philippine Legislature at the forthcoming session.

CONCLUSION

On the whole, the work performed by this department and its several bureaus during the year that has just passed may be favorably compared with that of previous years. Its importance can be fully appreciated only if we consider that the activities of the department form the mainstay on which the economic structure of the country is founded. The harnessing of the natural resources of the country for the purpose of making such resources yield the most for the welfare and prosperity of its inhabitants is indeed a task that necessarily taxes the supreme efforts of those placed to administer them. In the work of administering these resources, there are big and important problems to solve. The undersigned has been placed to head the department only quite recently, and although he came to office with definite ideas about the major problems confronting the administration, he is still in the process of acquainting himself thoroughly with the activities of the different offices placed under his supervision, even to the minute details, in order to have a full understanding of what should be the proper remedy in case of necessity.

As already stated in the earlier part of this report, the undersigned has formulated a plan for the rapid development of the public domain which he hopes, after receiving the formal sanction of the competent authorities, and with the cooperation of those directly concerned, to push through to a successful end. It is also planned to coordinate the activities intended to promote agriculture, and for this purpose, the department has secured the services of a tech-

nical expert to inquire into the matter. The exploitation of the other natural resources of the country and the advancement of scientific activities will no less deserve the careful attention of this office, and the details of the program for their development will be laid out as often as the economic interests of the country demand. With the working out of a clean-cut program of development which will be the main aim of this administration, together with the wholehearted support of the people who are beginning to take a keener interest in the proper utilization of the country's natural wealth, the economic outlook for the ensuing years promises to be a bright one.

Very respectfully,

RAF. R. ALUNAN,
Secretary of Agriculture and Natural Resources.



ANNUAL REPORT OF THE DEPARTMENT OF COMMERCE AND COMMUNICATIONS

MANILA, March 22, 1929.

SIR: I have the honor to submit the following annual report of the department of commerce and communications for the year ending December 31, 1928:

The Hon. Cipriano E. Unson was acting secretary of commerce and communications during the year until September 7, when the undersigned assumed his present position.

The first important problem that arose was the rapid rise of the price of rice. The situation, however, did not reach a critical state, due to the timely intervention of the government which investigated the existing stock and conferred with the merchants who showed willingness to cooperate. In this connection, the legislature passed Act No. 3469, known as "bonded rice warehouse act," requiring persons engaged in the business of storing rice to secure license therefor and furnish the director of commerce and industry with certain data and bond.

There were other important legislations passed during the year in which this department is interested in or by which it is affected. Act No. 3444 has made available the sum of ₱1,000,000 in two installments, for the purchase of four new vessels which are badly needed for an adequate lighthouse and sea transportation service. The plan for the ships to be acquired is now under technical advisement to insure maximum efficiency and seaworthiness.

Another Act No. 3449 has authorized the use of certain appropriations totaling ₱595,000 for the acquisition by purchase or otherwise of a fully-equipped cable-ship, negotiations for which are still under way.

The Robert Dollar Co. and the Mackay Radio Telegraph Co. of California were both granted a franchise to construct, maintain, and operate in the Philippine Islands stations for the transmission and reception of wireless messages for stated purposes and subject to certain limitations. The Philippine Long Distance Telephone Co. was also granted under Act 3436 a franchise to install, operate, and maintain a telephone system throughout the Philippine Islands.

As regards public works, Act 3460 has appropriated ₱10,294,200 for public buildings, schools, roads, investigation and maintenance of irrigation systems and water rights, artesian wells, port works, river control, telephone, telegraph and radio communication systems, lighthouses, buoys and beacons and miscellaneous projects. The legislature has also created by Act 3500 a revolving fund of ₱5,000,000 for the construction of permanent bridges in the Philippines.

A REVIEW OF BUSINESS CONDITIONS DURING THE YEAR 1928

The year 1928, while moderately prosperous, has been below the standard of prosperity that should be expected at this stage of our present commercial and economic development. While many of our business firms enjoyed relative prosperity and a few of them had their best year, the greater number saw their profits greatly reduced. This condition was primarily due to the bearish tone which prevailed during the year in the local as well as the foreign markets for our staple agricultural products and the consequent drop in prices. This has made a great number of merchants rather pessimistic about the immediate future, and their pessimism has been aggravated by the uncertainty that has been caused by the Timberlake threat against the unlimited free entry of Philippine sugar into the United States and the other proposed tariff changes detrimental to Philippine interests. Such drastic measures can not but arrest the course of our economic progress; developmental work can not proceed until the clouds that obscure the way have been cleared.

Another factor which has slowed down business activity in various parts of the country was the destructive typhoon that devastated the Bicol and Visayan

regions and northern Luzon. It is not an easy matter to repair the damage done nor to restore immediately the productive capacity of the devastated regions. The reconstruction of those places will take time; and meanwhile their reduced productivity will also reduce their purchasing power. This will naturally curtail their demand and consumption.

While the year 1928 experienced these disappointments and disasters and while the future outlook seems uncertain, it developed conditions which were a marked improvement over those of the preceding year. Prices of export commodities, for example, did not fall as they did in 1927; thus there was more certainty and less speculation in business transactions. The export trade, while reduced in money value, was in effect much greater in volume than that of the preceding year; and the total foreign trade recovered from a deep sagging much earlier than in 1927. Agricultural production, judged from the volume of products which passed through the channels of trade, was much higher. The local banks operated on a greater volume of transactions; and in spite of lower prices, the aggregate gross sales of merchants, peddlers, and manufacturers, almost equalled the record of 1927.

FOREIGN TRADE

The total foreign trade of the Philippines reached another high point when it registered a total of ₱579,422,888 as against ₱542,851,113 in 1927, or an increase of about 6.6 per cent. Imports increased from ₱231,702,943 in 1927 to ₱269,313,796 in 1928, or 16.2 per cent; while exports decreased from ₱311,148,170 in 1927 to ₱310,109,092 in 1928, or about three-tenths of 1 per cent. The balance of trade, which again is favorable to the country, was reduced from ₱79,445,227 to ₱40,795,296.

The development of the foreign trade during the year is indicated by the following figures:

	Imports	Exports	Total
January.....	₱ 26, 277, 536	₱ 27, 784, 582	₱ 54, 062, 118
February.....	19, 559, 380	27, 470, 845	47, 030, 225
March.....	24, 929, 796	29, 387, 681	54, 317, 477
April.....	19, 190, 695	28, 690, 864	47, 881, 559
May.....	19, 789, 865	24, 696, 983	44, 486, 848
June.....	18, 499, 727	26, 593, 539	45, 093, 266
July.....	28, 045, 453	19, 511, 813	47, 557, 266
August.....	23, 107, 017	19, 680, 719	42, 787, 736
September.....	20, 973, 037	23, 485, 215	44, 458, 252
October.....	25, 036, 050	27, 986, 241	53, 022, 291
November.....	20, 779, 614	21, 195, 180	41, 974, 794
December.....	23, 125, 626	33, 625, 430	56, 751, 056
Total.....	269, 313, 796	310, 109, 092	579, 422, 888

With the exception of the general rise in practically all lines of imported articles and the sudden substantial increase in exports during the month of December, the foreign-trade situation offered no interesting development.

The general improvement in the import trade is generally attributed to the reaction of a huge favorable balance of trade during the preceding year, which greatly increased the purchasing power of the people and the credit balance of the country abroad, especially in the United States. The increase in the import trade benefits not only the United States but practically all the countries trading with the Philippines. The most notable increases were the following:

	1928	1927	Increase
			<i>Per cent</i>
French/ East Indies.....	₱4, 802, 695	₱2, 441, 311	97
Canada.....	797, 845	460, 872	73
Switzerland.....	3, 315, 550	2, 451, 143	35
Belgium.....	2, 916, 033	2, 284, 233	28
British East Indies.....	6, 004, 675	4, 725, 601	27
Sweden.....	624, 100	494, 162	26
United States.....	167, 716, 135	142, 956, 594	17
Japan.....	25, 861, 753	22, 185, 451	17
Great Britain.....	11, 297, 361	10, 367, 353	9

Practically all lines of imports registered increases, the most important being as follows:

	1928	1927	Increase
			<i>Per cent</i>
Iron and steel goods.....	P40,296,562	P30,855,639	30
Breadstuffs (rice and wheat flour).....	17,617,211	13,677,956	28
Automobiles and accessories.....	8,596,806	6,770,748	26
Cotton goods.....	56,270,701	46,085,427	22
Mineral oils.....	19,080,523	16,752,619	14
Cigarettes, etc.....	6,202,070	5,491,741	13
Vegetables.....	4,081,743	3,619,339	13
Coal.....	5,183,153	4,606,927	13
Paper and its manufactures.....	8,257,529	7,654,852	8
Meat and dairy products.....	13,346,159	12,418,212	7
Silk goods.....	8,512,739	7,960,729	6

While exports registered an insignificant decrease from the preceding year, a number of the minor exports and the coconut products—copra, copra meal, and desiccated coconut—made substantial gains. Refined sugar headed the list with an increase of 336 per cent; buntal fibers, with 255 per cent; buntal hats, with 112 per cent; and embroideries, 13 per cent. Leaf tobacco registered a decrease of 23 per cent; raw sugar, 23 per cent; centrifugal, 6 per cent; coconut oil, 7 per cent; knotted hemp, 52 per cent; abaca (manila hemp), 10 per cent; canton, 21 per cent; and maguey, 14 per cent.

The decrease in exports was due to low prices for the principal agricultural products of the country. The volume of shipments to foreign countries increased from 1,302,686 tons to 1,314,835 tons in 1928.

AGRICULTURAL PRODUCTION

Philippine agricultural conditions are generally little affected by the fluctuations or the ebb and flow of business. Judged from the movements of the staple products which enter the channels of trade, production made a slight gain over the preceding year's record. It is reliably reported that the Manila Railroad Co., in spite of the keen competition offered by the motor-truck operators, actually experienced a shortage in cars for the handling of the agricultural produce for the market. The steamship lines also reported a high movement of the staple products from the Provinces. From these records of crop movements it would seem that rice and tobacco production decreased somewhat, and the other crops made more or less substantial gains. The income from agriculture could not have been very much below the record for last year, in spite of the low prices.

WHOLESALE PRICES AND THE LOCAL MARKET

The local market for the staple agricultural products and exports was generally weak and featureless. The volume of sales for foreign shipment, however, has been a little higher than in the preceding year. This would make the general or aggregate returns not entirely disappointing. Some of the staples spurted now and then, but the trend was not consistent enough to create a bullish tone in the market.

To a great number of merchants the prices that prevailed during 1928 had been exasperatingly low. The fact, however, was that the average price level for 1928 was a little higher than that for 1927. The difference lies in the fact that while prices for 1927 started high they went down to a level below the minimum of 1928 prices. During 1928, wholesale prices, though low, were more or less stable, thus creating a greater certainty in business transactions.

The average price for sugar was just a little higher than in the preceding year, but the great bulk of shipments were made when prices were low. In contrast with the other staples, sugar prices described a convex trend, viz, beginning and ending low and high in the middle. With the persistent efforts in the United States to limit the amount of free sugar, it would not be illogical to predict a further fall in prices.

Copra was steady during the first months, but little sales were made. Prices gradually went down toward the end of the year, in spite of the competition of exporters, but recovered slightly during December. Coconut oil and the

other coconut products followed the trend of copra. Two important mills stopped operations during the year, due either to lack of supply or to the further decline in prices.

Rice showed some interesting developments, especially about the end of the year. Prices were at rock bottom during the first eight or nine months, but at the end of the third quarter, due to reported depletion of the stocks here and abroad, prices moved abruptly upward and continued at a high level to the end of the year.

Abaca (manila hemp), maguey, and other hard fibers continued their plunge to lower levels which started in the preceding year. Maguey recovered a little in December. The destruction of abaca plantations by the last typhoon was predicted to help boost abaca prices a little. The decline since the typhoon, however, has been continuous.

Nonagricultural products would seem to have followed the general trend. Lumber, however, was an exception. The hectic activity in construction placed a premium upon construction materials. The market, however, quieted down toward the end of the year.

While the index number for wholesale prices indicates a stable condition of the market and under ordinary conditions offers a safe basis for predicting a near improvement, the uncertainties surrounding our relations with the major market for our products suggest caution rather than free expansion. The continuation of a stabilized market would be greatly preferred, but further decline would seem to be unavoidable under the present circumstances.

DOMESTIC TRADE

The reduced unit prices for the principal crops and the slow movement of trade, especially the export trade during the early months, had, as was expected, the effect of restraining local demand and consumption, which in turn affected retail sales. The returns show an unusually poor situation during the first months of the year. A greater activity was registered during the third and fourth quarters, but was not sufficient to raise the result to the level of last year. The total gross sales as reported by merchants, peddlers, and manufacturers amounted to ₱1,141,019,000 as compared with ₱1,172,045,000 in 1927. Low prices account for much of this decline.

However, the movement of goods and the distribution of imported articles to the consuming markets have been more active than in the previous year. So great was the movement that transportation companies and entities sprang up everywhere and old ones expanded their rolling stocks to meet the demand. A keen competition finally arose between freighters and public-utility transportation companies, and rates had to be slashed as never before known in the history of Philippine transportation. The quality of service likewise was greatly improved as a result of the competition. New steamships, commodious and comfortable, were placed on the old routes, railroad cars were greatly improved and increased, and autobus lines had to offer greater convenience to their patrons at greatly reduced rates to withstand the competition. It is also partly this slashing of rates and more rapid and commodious transportation, which helped reduce prices considerably. To the consumer the situation is thus a great blessing. And the unusually heavy sales of motor trucks and registration of public-utility transportation companies would seem to assure the continuation of this condition.

MANUFACTURING

With the exception of a very few manufacturing establishments, such as copra meal and coconut oil, which, however, showed signs of improvement about the end of the year, industrial activity continued its onward progress. The output, based on the volume of exports of manufactured articles, increased by around 18 per cent. Particularly active were the desiccated-coconut producers, embroidery shops, hat manufacturers, tanneries, pearl-button factory, shoes and slipper establishments, sugar refineries, cigarette and to some extent cigar manufacturers, sawmills, cordage factories, furniture establishments, and many others. The year also witnessed the rapid growth of electric light and power plants.

Labor has not been restless, although there were a few strikes in the city and in some sections in the south. Unemployment is apparently much less,

through this state may be due to the continuous exodus of Filipino laborers to Hawaii and the United States. The construction boom has created a premium on work hands in this line, and an improvement in industrial activity must have reduced greatly the unemployment problem.

INVESTMENTS AND FINANCE

What may be regarded as a distinct advance in the commercial progress of the country is the evident change in the attitude of the people toward economic problems. The recent enactment of laws tending to foster and enhance the economic development of the country is a step that will have a far-reaching effect on the life of the people. As a result of this change of attitude, an increasingly greater amount of capital is being invested in the organization of corporate enterprises, especially for developmental purposes. The record of investments during 1928 shows an increase in the paid-in capital of corporations from ₱7,553,113 in 1927 to ₱8,055,165 in 1928. Partnerships registered in Manila showed a slight decline, while in the Provinces the decline was from ₱2,523,736 in 1927 to ₱1,701,027 or a decrease of 33 per cent. The aggregate investments in new enterprises or reorganization of old ones likewise decreased from ₱15,789,937 in 1927 to ₱14,970,068 in 1928, or a decrease of about 5 per cent.

The decrease in the aggregate investment was mainly due to the decrease in the investment in commercial enterprises, as the investment in developmental entities, as agriculture, mining, lumbering, etc., increased considerably during the year, from ₱1,038,410 in 1927 to ₱2,269,293 in 1928, or an increase of about 119 per cent.

The continued huge volume of importation of foreign goods and the consequent reduction in the balance of trade, reduced somewhat the monetary circulation in the country, and if we add to such a situation the fact that consumption is restrained because of the downward trend of business the previous year, the money in actual circulation must have been reduced to a greater extent than the official figures indicate. The total circulation declined from an average of ₱138,000,000 in 1927 to around ₱128,000,000 in 1928.

Manila commercial banks reported a fairly good business during the year. A number reported the greatest amount of profits in their history, while there were also some which reported a greatly reduced profit compared with the preceding year. On the whole, Manila banks operated on a greater volume. Their total resources considerably increased, their investments much greater, and their aggregate loans and discounts slightly higher.

PROSPECTS

Business enters 1929 with varied expectations. A number—those directly concerned with the proposed changes in the tariff relations between this country and the United States—are naturally fearful of future developments. We all have reason to feel the same, as the products affected constitute the greatest factors in the life and well-being of millions of our people. There are those who believe and have faith in the stability of the fundamental factors in our life; they are optimistic about the future whatever be the developments. As a matter of fact, in spite of the uncertainty, a great number of enterprises enjoyed reasonable prosperity. If it turns out, however, that after all no drastic changes will be adopted by the American Congress, business will realize that it had worried itself unnecessarily and will again move on its customary course. Then it will in all probability record a more prosperous year.

ADVISORY BOARD ON PORTS AND HARBOR IMPROVEMENT

By Executive Order No. 144 of December 13, 1928, the undersigned was appointed chairman of an advisory board on ports and harbor improvements with the following original members: Lieut. Col. Max C. Tyler, Engineer Corps, United States Army; the Hon. Ramón Fernández, Manila; Capt. R. C. Morton, United States Shipping Board; Mr. Vicente Madrigal, Manila; Mr. Lorenzo Correa, Manila; and Mr. Howard Cavender, Manila. Their duties were to examine into the conditions of the port and harbor facilities of the Philippine Islands with a view to the improvement thereof for commerce, particularly for interisland commerce and shipping, and to make a report

which may constitute a comprehensive program for such improvement, recommending the ports to be improved and the order of such improvement together with the reasons therefor; the method of improvement, including improvement of land approaches; and an estimate of the expense of each improvement separately.

The board met for the first time on December 20, 1928, and held weekly meetings thereafter. From the very beginning, men in the government service with technical training were in attendance. One of the steps taken at the first meeting was the creation of two committees assisted by technical advisers; namely, the committee on ports of entry and the committee on coastwise ports.

Each member was furnished with the following data:

A. From bureau of public works—

(1) A list of provincial port works projects completed, or under construction, giving the names of the projects, estimated cost, appropriations made to date, work completed, proposed improvements, depth of water, remarks.

(2) A list of port works projects under consideration, giving names of projects, cost, description of proposed structures, water, and remarks.

(3) Maps showing locations of projects under way and under consideration.

(4) Scale maps of the various ports showing the location of existing and proposed ports (in preparation and will be submitted to the board at an early date).

B. From bureau of commerce and industry—

(1) A memorandum suggesting the most reasonable basis for determining the relative importance of coastwise ports—and that is the volume of business done by each—and submitting a list of coastwise ports over ₱300,000 value of outgoing staple products in 1927; economic data on the Provinces served by the 50 coastwise ports listed above; area, population, estimated wealth, and domestic trade of the Provinces of the Philippines.

(2) A memorandum suggesting criteria for the determination of the relative importance of the seven existing ports of entry—Manila, Legaspi, Iloilo, Cebu, Zamboanga, Davao, Jolo, the criteria being number of foreign vessels entered, inward foreign cargo, outward foreign cargo, net tonnage of coastwise vessels, value of imports, value of exports, customs collections, and giving statistics covering these points for each of the ports of entry.

C. From the bureau of coast and geodetic survey—

(1) A list of existing ports according to public service commission classification.

(2) A list of some important harbors of refuge, Philippine Islands.

To make the conduct of the deliberations of the board systematic a classification of ports was adopted. With appropriate subdivisions ports were divided into ports of entry, harbors of refuge, and coastwise ports.

In view of the limited time within which the board was required to report to His Excellency, it was decided at the second meeting to limit the attention of the board to existing ports of entry and coastwise ports.

In order to make investigations and to submit to the board recommendations regarding the ports above mentioned, a committee of technical men was created with the following members: Commander L. O. Colbert, as chairman; Director A. D. Williams; Director Fidel A. Reyes; Capt. Manuel del Villar; Mr. José Gallopin; Lieut. Col. Max C. Tyler, and a representative from the Navy, as members.

The work of the board was still in progress at the end of the year.

BUREAU OF PUBLIC WORKS

ORGANIZATION AND PERSONNEL

The Philippine Islands are now divided into 47 engineering districts which, with the exception of a separate district for the city of Manila, are coextensive with provincial limits. The district engineer is the local representative of the bureau in each district and is responsible for all activities, excepting the larger irrigation projects which are constructed by project engineers under the direct supervision of the Manila office. The central office in Manila prepares plans and specifications for construction projects and exercises general supervision over all activities of the bureau.

PERSONNEL

Number of employees paid direct from bureau and project funds as of December 31, 1928: Americans, 14; Filipinos, 540.

(NOTE.—The corresponding figures for December 31, 1927, are: Americans, 18; Filipinos, 362, respectively.)

Number of technical employees as of December 31, 1928: Americans, 9; Filipinos, 217.

(NOTE.—The corresponding figures for December 31, 1927, are 10 and 210, respectively.)

The activities of the bureau during 1928 were materially increased on account of the amount of increased appropriations provided for public works.

The larger results of the year's work

Surfaced roads constructed and designed first class-----kilometers--	356.4
Reinforced-concrete bridges and culverts completed (in this figure, concrete-pipe culverts are not included)-----	48
Successful deep wells completed-----	90
Reinforced-concrete buildings completed—including only buildings of over 100 cubic meters capacity-----	125
Irrigation projects completed-----	3
Waterworks projects completed (total population served, 54,300)-----	15

Expenditures supervised during the year 1928 as compared with the year 1927

	1927	1928
Total expenditures-----	P25,629,000.45	P28,925,762.40
Total expended upon road and bridge work-----	12,075,299.80	13,884,383.27
Total expended upon building work-----	5,428,597.98	6,838,439.99
Total expended upon port works-----	3,137,225.66	2,846,691.52
Total expended upon water supply-----	1,824,029.20	1,700,775.38
Total expended upon irrigation projects-----	1,886,021.18	2,046,923.39
Operation of auto line, quarries, and the supervision of motor-vehicle traffic-----	365,420.23	441,950.12
Expenditures on miscellaneous items account for the balance-----	912,406.40	1,166,598.73

REGISTRATION AND REGULATION OF MOTOR VEHICLES

During the year ending December 31, 1928, there were 5,079 motor vehicles newly registered and 24,967 reregistered for operation, or a total of 30,046 motor vehicles, as compared with 27,597 registered during 1927. There were also 2,630 motor vehicles registered for storage. During this same period 15,009 applicants for drivers' licenses were examined and 7,907 new licenses issued. Including renewals, 47,956 operators of motor vehicles were licensed during 1928.

COLLECTIONS AND EXPENDITURES

The following tabulation shows the yearly amount of funds collected and expended for the registration and regulation of motor vehicles from 1912 to 1928:

Year	Collections	Expenditures	Year	Collections	Expenditures
1912-----	P13,469.00	P3,930.70	1921-----	P207,275.53	P64,000.00
1913-----	19,392.66	19,630.72	1922-----	518,825.85	47,774.93
1914-----	16,335.00	15,874.74	1923-----	628,918.54	60,000.00
1915-----	20,305.00	16,233.28	1924-----	633,214.36	50,000.00
1916-----	37,561.97	9,041.95	1925-----	798,438.62	63,025.50
1917-----	62,002.19	18,414.31	1926-----	985,051.28	62,555.55
1918-----	84,243.74	81,051.79	1927-----	1,145,369.34	83,040.00
1919-----	113,909.11	70,000.00	1928-----	1,254,684.81	88,540.00
1920-----	177,263.24	75,000.00			

BENGUET AUTOMOBILE LINE

During 1928, the Benguet Automobile Line operated 5 first-class White busses, 1 third-class White bus, 2 combination baggage and passenger White trucks, 4 express and freight White trucks, ten 5-passenger Dodge touring cars, two 5-passenger Dodge sedan cars, two 7-passenger Studebaker touring cars, one 7-passenger Hudson touring car, one 5-passenger Chevrolet touring car, 1 first and third-class Chevrolet bus, and 1 baggage and delivery Chevrolet truck; and handled 8,056 full rate and 405 half rate first-class passengers, 12,280 full rate and 2,501 half rate third-class passengers, 3,284,012 kilos of express and freight, 7,855 pieces of hand baggage, and 122,242 kilos of "dead-head" express and freight.

The total income of the line during the year, including special cars hired in and around Baguio and for trips to Manila and various Provinces, amounted to ₱192,437.60 as compared with ₱175,250.53 during 1927 (the former figures not including Manila Railroad Co.'s collection for December, 1928), while the total expenditure for the year amounted to ₱185,410.12 as against ₱130,380.23 for 1927. The increased expenditure was due to the purchase of three trucks and five passenger cars and the payment of ₱10,000 as flat tolls for the use of the Kennon Road.

THE USE OF THE KENNON, NAGUILIAN, CAMP ONE-DAMORTIS, AND BAGUIO-BONTOC ROADS

The gang system of maintenance was continued on the Kennon and Naguilian Roads. While the macadam surfacing was maintained in a fairly satisfactory condition, the increasing amount of traffic makes it advisable to apply a surface treatment of asphalt as soon as funds can be provided for this work. This improvement would greatly reduce maintenance cost. On the Naguilian Road, sharp curves were improved and split curves provided wherever necessary to further insure the safety of traffic.

The improvement of the Baguio-Bontoc Road was continued up to kilometer 372 and at the end of the year was passable for small automobiles during favorable weather conditions.

BAGUIO COTTAGES AND APARTMENTS

The insular government cottages and apartments (formerly office buildings) were leased to Government employees and private parties in accordance with the regulations governing same approved under date of June 23, 1925. As in 1927, there was a large demand for these accommodations during the past season. During the months of June, July, August, and September, a number of cottages and apartments were leased to vacationists from the China coast. The total income from the cottages and apartments during the year amounted to ₱49,962.01, while the cost of maintaining and operating same was ₱44,720.

LOS BANOS QUARRY

The insular quarry at Los Banos was not ready for operation at the new crusher site until late in the year. The delay in transferring the crushers was due to noncompletion of the railroad extension, and the time consumed in finishing the bins and trestle. Of a total appropriation of ₱140,000, the sum of ₱88,000 was expended on rock production, the output for the year being 37,951 cubic meters, of all classes, valued at ₱102,793. The remainder of the appropriation was expended on the completion of the plant.

ROADS

With allotments totaling ₱4,500,000 from the gasoline tax law, Act 3248, and ₱1,000,000 from the motor vehicle law, Act 3045, in addition to the regular appropriations amounting to ₱10,699,691.49 provided by the legislature and provincial boards of the various Provinces, the constructing division was enabled to carry out the most active road construction program during 1928 in the history of the bureau. The result was an increase of 356.4 kilometers of first-class roads as compared with an increase of 187.2 kilometers in 1927. There was also an increase of 157.6 kilometers in the length of second and

third-class roads. The total kilometerage of first, second, and third-class roads at the end of the year was 11,892.3 kilometers.

In addition to the funds mentioned above the proceeds from the sale of provincial bonds were available to the amount of ₱1,637,000 for the construction of important permanent bridge projects in the Provinces of Nueva Ecija, Laguna, Tarlac, Bulacan, and La Union, and to the amount of ₱850,000 for the construction of approximately 27 kilometers of concrete pavement on the Manila-Tarlac Road in the Province of Pampanga. All of the bridge projects were practically completed at the end of the year, with the exception of the Pampanga River bridge at Cabanatuan, Nueva Ecija, which consists of 13 spans of 150-foot steel trusses on concrete piers and abutments. This bridge will be completed before the next rainy season, and will provide a much-needed improvement in view of the large amount of traffic using this crossing and the difficulty of maintaining satisfactory ferry service during the rainy season.

The finances for road maintenance work are now well provided for, and while the average cost of maintaining both first class and second and third class roads was slightly less than during the previous year the cost of maintaining macadam roads carrying heavy traffic was excessively high in many cases. The construction of hard-surface pavements is the proper solution of this problem, but unfortunately sufficient funds have not been available to keep up with the demand for such pavements. The revenue derived from the gasoline tax law provides a limited amount of money for this work, and a total of 38 kilometers of asphalt pavement constructed during the year was financed from this source. The delay in releasing these funds, however, resulted in approximately ₱3,000,000 remaining unexpended at the end of the year.

Funds from the 25 per cent discretionary portion of the gasoline tax fund were expended largely on the improvement of roads carrying heavy traffic. Considerable improvement work was accomplished on the Manila north and Manila south roads, and also on roads leading from the cities of Cebu, Iloilo, and Legaspi. The improvements made consisted in the elimination of dangerous curves, widening of narrow sections of road and narrow culverts and bridges, construction of diversion roads to by-pass towns where adequate rights of way could not be secured at a reasonable cost, and in asphaltting of sections of roads through towns and barrios to eliminate the dust nuisance and to reduce the cost of maintenance. A large amount of similar work remains to be done on roads subjected to heavy traffic.

Increase in first-class road kilometerage during the year 1928

Province	Roads in exist- ence Dec. 31, 1927	Roads in exist- ence Dec. 31, 1928	Increase during the year 1928	Province	Roads in exist- ence Dec. 31, 1927	Roads in exist- ence Dec. 31, 1928	In- crease during the year 1928
Abra.....	64.4	73.2	8.8	La Union.....	121.1	121.9	0.8
Albay.....	217.8	213.6	13.8	Leyte.....	141.8	141.8	-----
Antique.....	108.8	98.7	10.1	Marinduque.....	51.5	51.5	-----
Baguio.....	57.0	60.9	3.9	Masbate.....	44.6	44.6	-----
Bataan.....	41.3	45.3	4.0	Mindoro.....	55.0	54.8	1.2
Batangas.....	208.5	208.5	-----	Misamis.....	122.0	128.4	6.4
Benguet.....	72.4	72.4	-----	Nueva Ecija.....	208.2	261.2	53.0
Bohol.....	249.6	260.4	10.8	Nueva Vizcaya.....	66.5	81.8	15.3
Bulacan.....	116.3	122.7	6.4	Occidental Negros.....	363.9	390.5	26.6
Cagayan.....	74.0	74.9	.9	Oriental Negros.....	179.3	188.0	8.7
Camarines Norte.....	34.3	40.9	6.6	Pampanga.....	203.4	203.9	.5
Camarines Sur.....	162.0	162.0	0.	Pangasinan.....	499.2	514.9	15.7
Capiz.....	204.1	204.1	0.	Rizal.....	191.6	194.4	2.8
Cavite.....	99.5	100.2	.7	Samar.....	110.6	110.6	-----
Cebu.....	337.3	337.3	-----	Sorsogon.....	130.7	161.5	30.8
Cotabato.....	25.3	27.3	2.0	Sulu.....	26.8	41.8	15.0
Davao.....	30.8	35.0	4.2	Surigao.....	54.3	63.8	9.5
Ilocos Norte.....	91.4	91.4	0.	Tarlac.....	161.8	178.0	16.2
Ilocos Sur.....	184.2	187.7	3.5	Tayabas.....	199.6	205.5	5.9
Iloilo.....	287.1	309.6	22.5	Zambales.....	82.9	116.2	33.3
Isabela.....	86.1	102.7	16.6	Zamboanga.....	62.1	62.1	-----
Laguna.....	161.4	172.6	11.2				
Lanao.....	43.4	43.4	-----				
				Total.....	6,033.9	6,380.0	346.1

¹ Decrease due to remeasurement of roads.

The following is a brief description of the more important road-construction projects:

Agusan-Surigao interprovincial road, Agusan Province.—This road is 44.4 kilometers long and is the first step in providing a land route to connect the Provinces of Agusan and Surigao. During the past year 10.5 kilometers of road were graded at a cost of ₱21,827.86.

Ligao-Panganiban Road, Albay Province.—This road is 35 kilometers long and will connect the town of Ligao with the west coast of the Province and open up extensive agricultural lands for development. The work accomplished during the year included 8.8 kilometers of subgrade, 4.7 kilometers of metalling, and the construction of several timber trestle bridges. The amount expended during the year was ₱42,331.31.

Bataan-Zambales interprovincial road.—The work accomplished on this road, which is 19.5 kilometers long in Bataan Province, consisted in the widening of 5.5 kilometers of trail and the reconstruction and repair of 3.5 kilometers of the old subgrade. Temporary timber bridges were also constructed over two rivers and five creeks. The total expenditure during the year amounted to ₱39,743.10.

In Zambales Province the road is 22.2 kilometers long and passes through a United States naval reservation at Olongapo. The section between Subic and Olongapo, a distance of 11 kilometers, has been completed as first-class road and 2-M trail has been constructed between Olongapo and Bataan boundary. The total expenditure during the year was ₱29,982.99.

Batangas-Cavite interprovincial road, Batangas Province.—This road will connect Tuy (Batangas) with Indang via Mendez (Cavite) and will be 18.4 kilometers long on the Batangas side. The work accomplished during the year was the completion of 2.5 kilometers of subgrade, 2 kilometers of first-course surfacing, and the construction of temporary timber bridges and several pipe culverts. The total amount expended was ₱47,447.48.

In Cavite Province the amount expended was ₱27,075.76 and the work accomplished was the completion of 1 kilometer of first-class road and 8 kilometers of subgrade. The Cavite section is 22.2 kilometers long.

This road when completed will give the western towns of Batangas a more direct route to Cavite and Manila and, at the same time, provide an outlet for large tracts of land planted with sugar cane and coconuts. It will also make possible the establishment of the proposed health and summer resort on the Tagaytay Ridge which is over 2,000 feet above sea level.

Loay-interior road, Bohol Province.—This project starts from the town of Loay on the south road, a distance of 79.4 kilometers, with a total expenditure of ₱45,033.32 during 1928. The subgrade work was completed to barrio Ipil, including the construction of several temporary timber bridges and concrete pipe culverts.

Manila north diversion road, Bulacan Province.—These diversions are being constructed to by-pass the towns of Marilao, Meycauyan, Bocaue, San Miguel, and Polo in order to eliminate dangerous curves and narrow road sections on the present road, and to relieve the congestion of traffic in these towns. The total expenditure on this project during the year amounted to ₱248,711.60.

Cagayan Valley Road, Cagayan Province.—The work accomplished during the year was the completion of 22.53 kilometers of second-class road, the reconstruction of several temporary timber bridges, and the construction of concrete pipe culverts. The total expenditure was ₱154,796.38.

Cagayan Valley Road, Isabela Province.—The work accomplished during the year consisted in the completion of a first-class road from Cauayan to Naguilian, 14.6 kilometers, the repairs of temporary structure, and the delivery of surfacing material along the Ilagan-Naguilian section. The total expenditure amounted to ₱184,638.89.

Cagayan Valley Road, Nueva Vizcaya Province.—Eleven and thirty-six hundredths kilometers of first-class road was completed with a total expenditure of ₱56,190.85.

Cagayan Valley Road, Nueva Ecija Province.—The work on this project was confined to the widening of the section between kilometer 205 and kilometer 211. Two kilometers of road was also widened between kilometer 211 and Sta. Fe. Several sections which were damaged by the extraordinary heavy rains in November were resurfaced. The total amount expended during 1928 was ₱67,782.17.

Capiz-Iloilo interprovincial road, Capiz Province.—This road is 60.9 kilometers long and will connect the Ilayan and Akian sections of the Province.

The work accomplished consisted of the repair of 12 kilometers of subgrade, placing of 11.5 kilometers of first-course surfacing and the construction of several timber bridges and concrete pipe culverts, with a total expenditure of ₱52,566.10.

On the Iloilo side the road is 10 kilometers long. The work on this project during the year was the completion of 6.2 kilometers of subgrade, at a total cost of ₱24,486.70.

Cotabato-Davao interprovincial road, Cotabato Province.—This project is 139 kilometers long starting from Cotabato-Parang Road and passing through 16 kilometers of rolling country to the barrio of Manuangan; thence through rolling country to Pikit; thence through flat and fertile land to Kabakan and Kidapawan. The location survey and estimate of cost were completed during the year. Construction work was also accomplished on 4.5 kilometers of subgrade. The total expenditure during the year amounted to ₱24,208.85.

In Davao Province this road is 115.8 kilometers long, extending from the town of Davao to the Cotabato boundary, and passing through a highly developed country between Davao and Santa Cruz. The location survey and estimate of cost were completed during the year. Construction work accomplished included 5 kilometers of subgrade and 2 kilometers of surfacing. The total expenditure was ₱41,016.95.

Cotabato-Lanao interprovincial road, Cotabato Province.—The Cotabato section of this road is 82.75 kilometers long from the town of Cotabato to the Lanao boundary. The amount of ₱39,828.62 was expended for the construction of 6.5 kilometers of subgrade and placing 6.17 kilometers of first-course metaling, and several concrete pipe culverts.

In Lanao Province the road is 105 kilometers long and the sum of ₱65,460.85 was expended on surveys, preparation of plans, and estimates, and for the completion of 8.5 kilometers of subgrade, 3 kilometers of first-class road, and the construction of concrete pipe culverts.

Camarines Norte-Camarines Sur interprovincial road, Camarines Norte Province.—This road is 16 kilometers long in Camarines Norte and is a section of the Manila south road. It traverses a mountainous country with heavy forests. The work accomplished during the year included the grading of 7 kilometers of road, the construction of temporary bridges and concrete pipe culverts, at a total cost of ₱27,840.62.

In Camarines Sur the road is 62 kilometers long and the work accomplished consisted in the construction of 25 kilometers of 2-M to 5-M subgrade and 12 kilometers of 2-M metaling with a total expenditure of ₱33,629.68.

Camarines Norte-Tayabas interprovincial road, Camarines Norte Province.—The total expenditure on this project, 78 kilometers long, during the year amounted to ₱36,096.22. The work accomplished was the grading of 5 kilometers of road and the construction of temporary bridges and concrete pipe culverts.

In Tayabas Province the road is 62.6 kilometers long and ₱30,331.96 was expended on the construction of a 4-M trail, 14.5 kilometers long, and the completion of 3 kilometers of full-width subgrade.

Baybay-Abuyog Road, Leyte Province.—During 1928 the sum of ₱41,632.20 was expended on 9 kilometers of subgrade work and on the construction of several temporary structures.

Misamis-Zamboanga interprovincial road (Dapitan Plaridel section), Misamis Province.—This section is 25.22 kilometers long. The work accomplished was the clearing of 7 kilometers of heavy forest and the grading of 4 kilometers of road, at a cost of ₱21,041.96.

In Zamboanga Province the road is 34 kilometers long and ₱25,102.51 was expended on 3 kilometers of subgrade work, 2 of which were through solid rock and on the surfacing of 1 kilometer of road including some timber bridges.

Occidental Negros-Oriental Negros interprovincial road.—In Occidental Negros this road is 34.7 kilometers long and the work accomplished was the completion of the subgrade work and the metaling of several kilometers of road, with a total expenditure of ₱37,991.96. This road is now open to traffic during the dry season.

In Oriental Negros this road is 34 kilometers long and the work accomplished was the completion of 17 kilometers of second-class road and the construction of several temporary timber bridges. The total amount expended was ₱29,946.16.

Pampanga concrete road pavement, Pampanga Province.—This project consists in the construction of a concrete pavement, 6 meters wide and 15 centimeters thick, on a section of the Manila-Tarlac Road from kilometer 60.2 to kilometer 71.5, from kilometer 73 to kilometer 87.5. During the year, ₱30,016.21 was expended on the construction of 1.01 kilometers of pavement.

Taft Avenue extension, Rizal Province.—This project completes the extension of Taft Avenue from Manila through the municipality of Pasay. It is 3.34 kilometers long in Rizal Province. The subgrade was practically finished and 1.47 kilometers of first course adobe foundation stone laid and rolled. The total expenditure during the year amounted to ₱71,760.80.

Rizal Avenue extension, Rizal Province.—This road is an extension of Rizal Avenue from the city limits through the municipality of Caloocan to the Bulacan boundary. It has a total length of 3.83 kilometers and a right of way of 25 meters wide from the city limit to Samson Street (2.25 kilometers long) and 20 meters wide from Samson Street to the Bulacan boundary. The work accomplished during the year was the completion of the subgrade and the metaling of the entire road, at a total cost of ₱47,578.85.

Catbalogan north road, Samar Province.—This road when completed will connect the capital of the Province with the municipalities on the north coast of Samar. The length of the Catbalogan-Oquendo section is 88.2 kilometers. The work accomplished during the year was the widening of the subgrade from kilometer 28 to kilometer 44, the construction of temporary bridges and concrete pipe culverts and the surfacing with first course of 6.07 kilometers of road. The total expenditure during the year amounted to ₱91,969.18.

Catbalogan-Taft Road, Samar Province.—This is an intercoastal road, 94.0 kilometers long, connecting Catbalogan on the west coast and Taft on the east coast. The sum of ₱42,419.03 was expended during the year on the completion of the location survey and on the construction of 2.7 kilometers of subgrade work and 3.7 kilometers of first-course surfacing.

BRIDGES

The following are the more important bridges constructed or partially constructed during the year 1928:

Sinalang Bridge, Abra Province.—This bridge is being constructed over the Sinalang River on the interprovincial road connecting the Provinces of Abra and Ilocos Sur. It consists of one 160-foot and two 53-foot steel spans with concrete floor. The contract for constructing the substructure and the erection of the steel superstructure was let to the Butuan Saw Mill Co. (Inc.), of Cebu. The furnishing of the superstructure (structural steel) was let to the Atlantic, Gulf & Pacific Co., of Manila. The excavation for the abutment and the pouring of concrete for the footing on the Colonia side have been completed. The structural steel has been delivered by the Atlantic, Gulf & Pacific Co. to the Butuan Saw Mill Co. (Inc.), in accordance with the contract. At the end of the year 20 per cent of the work was completed. The work is progressing satisfactorily.

Laboc Bridge, Bohol Province.—This bridge consists of one 80-foot riveted pony steel truss span with concrete abutments and reinforced concrete floor. The construction of the substructure and the erection of the steel was let by contract to Mr. Ignacio Molina of Mabini, Bohol. The furnishing of the structural steel was awarded to the Atlantic, Gulf & Pacific Co., of Manila. At the end of the year 47 per cent of the work was finished, and it is expected that the project will be completed within the contract time.

Mambog Bridge, Bulacan Province.—The work on this project consisted in replacing the old superstructure of Spanish design with reinforced concrete slab and girder construction.

Atlag Bridge, Bulacan Province.—The work on this project consisted in replacing the old Spanish superstructure with reinforced concrete slab and girder construction.

Marilao Bridge, Bulacan Province.—This bridge, consisting of six 11-meter reinforced concrete slab and girder spans on concrete pile bents was widened to provide a roadway 5.5 meters wide and sidewalks on each side of the bridge.

Cafehan Bridge, Bulacan Province.—This project is an 11-meter reinforced concrete slab and girder bridge. The construction work was let under contract to the International Construction Works (Inc.), and was completed and opened to traffic on June 5, 1928.

Tullahan Bridge, Bulacan Province.—Construction work on this project was started in December, 1928. The bridge is on the Polo Division Road, over the Tullahan River, which forms the boundary line between the Provinces of Bulacan and Rizal. The structure consists of three 10-meter spans of reinforced concrete slab and girder type, supported on concrete piers and V abutments, with one abutment on wooden foundation piles. Construction work was let under contract to Mr. Marion E. Martin, but later subcontracted to the International Construction Works (Inc.). The work is progressing very satisfactorily.

Malinta Bridge, Bulacan Province.—The work on this project consists in placing a new superstructure on the piers and abutments of the old Spanish bridge which spanned the Manila Railroad tracks at Barrio Malinta, Polo Division road. Reconstruction includes two end spans of 5 meters each and one 6-meter center span of reinforced concrete slab and girder construction. The concrete caps for the old abutments and piers and the slabs and girders for two spans were completed during the year. The work is being done under contract.

Sibul Bridge, Bulacan Province.—Work on this project was started about the middle of December, 1928. The work consists in adding another span of reinforced concrete slab and girder construction to the old bridge on the Sibul end.

Bocaue Bridge, Bulacan Province.—The work on this project consisted in the widening of the roadway, the construction of sidewalks, and the repair of girders where the reinforcing steel had rusted and cracked the concrete. With the completion of this project and the Bocaue diversion road, one of the most dangerous and unsatisfactory sections of the Manila north road will be eliminated.

Meycauayan Bridge, Bulacan Province.—This bridge consists of two 120-foot steel trusses, on concrete abutments and pier. One abutment on the Meycauayan side, the pier and one span of steel superstructure were completed. The excavation for the other abutment was ready to receive concrete.

Bunlo Bridge, Bulacan Province.—The abutments of an old Spanish structure, which are still in good condition are being used in the reconstruction work, which consists in placing a standard 12-meter concrete slab and girder superstructure. At the end of the year only 7 per cent of the work was completed, but it is expected that the project will be completed on or about March 31, 1929.

Binakayan Bridge, Cavite Province.—Reconstruction work was done on this project. Formerly this was a 3-span wooden truss bridge resting on two concrete abutments and two pile bents. It has been converted into a 5 x 10-meter reinforced concrete deck girder bridge by adding three additional bents between the existing bents and abutments. The work was done by contract and was completed on July 19 and opened to traffic on August 29.

Novelata Bridge, Cavite Province.—This project included the erection of one 80-foot steel truss, 16-foot roadway with reinforced concrete floor on an old rubble masonry abutment at one end and on a new concrete abutment at the other end. The work was done by contract.

Medellin Bridge, Cebu Province.—This bridge is of the concrete arch type with a span of 16 meters and was constructed by the Butuan Sawmill (Inc.)

Camp No. 8 Bridge, Cebu Province.—This bridge is a 16-meter concrete arch and was constructed at kilometer 28.05, Cebu-Toledo Road. The approaches to this bridge have been completed and construction materials requisitioned.

Maragayap Bridge, La Union Province.—This bridge consists of one 160-foot steel through riveted truss span with reinforced concrete floor and concrete abutments. The construction of the substructure and the erection of the steel superstructure was done by Contractor Siochi and the structural steel furnished by Mr. A. G. Yankey. Construction work was started on June 2, 1928, and completed on December 11, 1928.

Cava Bridge, La Union Province.—This project is a concrete deck girder bridge of eight 9-meter spans over the Cava River on the Manila north road. The contract for this work was awarded to Messrs. H. T. Tukasawa and Ichilu Ito. On account of the difficulties encountered in driving piles in unfavorable weather, the contractor was unable to complete the project within the specified time and an extension of 80 working days was granted to him. At the end of the year the work was progressing satisfactorily and the project will be completed before the end of January, 1929.

Naugilian Bridge, La Union Province.—This is a steel bridge over the Naugilian River at kilometer 300.58 of the Bauang-Baguio Road, consisting of three 150-foot spans on concrete cylinder piers, and one concrete abutment on

the west end, and a temporary wooden trestle approach, 42 meters long, on the east end. The contract for furnishing the superstructure was let to Mr. A. G. Yankey, while the construction of the substructure and the erection of the steel superstructure were let to Mr. Tan Samco. The work is progressing satisfactorily and will be completed during the early part of 1929.

Lumban Bridge, Laguna Province.—The Lumban Bridge consists of three 120-foot steel truss spans, with 16-foot roadway on reinforced concrete abutments and piers. It spans the Lumban River at Lumban on the Pagsanjan-Lumban Road. The construction of the substructure was furnished by Mr. A. G. Yankey. This bridge was inaugurated on October 14, 1928.

Mangampon Bridge, Laguna Province.—This is a reinforced concrete arch bridge, 33.20 meters long with a clear span of 22 meters. It is located over the Mangampon River at kilometer 89 on the San Pablo-Alaminos Road. This project was completed June 13, 1928.

Malauud Bridge, Laguna Province.—This bridge is of the reinforced concrete slab and girder type, 11-meter span, on reinforced concrete abutments. This bridge is located at kilometer 91 of the Manila south road and was opened to traffic during the early part of April, 1928.

Pampanga River Bridge, Nueva Ecija Province.—The proceeds from a bond issue in the amount of ₱690,000 were made available for this project. The contract for the construction of the substructure and the erection of the steel superstructure was awarded to Mr. Juan Ferrer, and a contract for furnishing the fabricated steel to Mr. A. G. Yankey. The contractor for the substructure having failed to make satisfactory progress, the government was forced to annul the contract and undertake the work by administration in October, 1928. At the end of the year the two abutments and three piers were completed. The fourth pier was being constructed and foundation piles were being driven for the fifth. Excavation work was underway on the sixth and seventh piers and one steel span had been erected and two other spans were in the process of being erected. It is expected that the project will be completed before the next rainy season.

Binituan Bridge, Nueva Ecija Province.—This bridge is a 160-foot steel truss span, on two reinforced concrete abutments with wooden foundation piles. It is located on the Manila-North road near the municipality of Guimba. The construction of the substructure and the erection of the superstructure is being done under contract with Messrs. Arranz and Concepcion, while the fabricated steel was furnished by Mr. A. G. Yankey. Excavation work was underway on the north abutment and all the steel for the superstructure had been delivered at the site at the end of the year. This project will also be finished before the next rainy season.

Danao Bridge, Occidental Negros.—This bridge consists of six 9-meter spans, reinforced concrete slab and girder type. The contract for this project was awarded to Mr. B. Puentevella, and on December 31, 1928, 49 per cent of the work had been completed.

Suay Bridge, Occidental Negros Province.—The construction of this bridge, which is a 150-foot steel span on concrete abutments, was carried out under contract with Mr. A. G. Yankey. The project was completed and opened to traffic before the end of the year.

Ilog Bridge, Occidental Negros.—This bridge consists of two 160-foot steel spans and two 9-meter reinforced concrete slab and girder approach spans over the Ilog River. This bridge was also built by Contractor A. G. Yankey. It was completed and opened to traffic on August 4, 1928.

Ilinigaran Bridge, Occidental Negros Province.—This bridge consists of fifteen 9-meter reinforced concrete slab and girder spans, with a roadway of 4.88 meters. The work on this bridge was completed by Mr. A. G. Yankey, contractor, in May, 1928.

Calatrava Bridge, Occidental Negros.—This is a reinforced concrete slab and girder bridge of eight 9-meter spans, and is being constructed over the Calatrava River on the Escalante-Calatrava Road. The work was started in August, 1928, by administration, but the completion of same has been delayed, due to the fact that the equipment was used on other work.

Talabaan Bridge, Occidental Negros Province.—The contract for the construction of this bridge, consisting of one 120-foot steel span on concrete abutments, was awarded to Mr. Luis B. Puentevella in October, 1928, but very little work had been accomplished at the end of the year.

San Fernando Bridge, Pampanga Province.—This bridge is a 22-meter reinforced concrete arch with timber foundation piles. It has a length of 36.10

meters and a clear roadway of 6 meters. The work was started by contract in October, 1927, but the contractor failed to complete the bridge within the contract time and the provincial board of Pampanga approved of the annulment of same in November, 1928. The work was practically completed by administration at the end of the year.

San Vicente Bridge, Pangasinan Province.—This bridge was constructed in accordance with a special plan, consisting of two bridges spanning the San Vicente Creek on the boulevard leading to the provincial capitol building. Both bridges rest on timber foundation piles. One bridge was completed in August, 1928, by Contractor Nable and the project as a whole before the end of the year.

Inmanduyan Bridge, Pangasinan Province.—This bridge consists of one 160-foot steel truss with reinforced concrete floor and abutments on timber foundation piles, and was built under contract with Mr. Marion Martin, of Manila. The project was completed within the specified time and opened to traffic in May, 1928.

Parua Bridge, Tarlac Province.—This project consists of three 130-foot steel-truss spans with reinforced concrete floor, on concrete piers and abutments. The construction of the substructure and the erection of the steel superstructure are being done under contract with Mr. Manuel G. Palma, of Manila. The fabricated steel for the superstructure was furnished by Mr. A. G. Yankey. The work is expected to be completed in April, 1929.

Cutcut Bridge, Tarlac Province.—This bridge is located on the Manila-North road at kilometer 11.60. It consists of one 160-foot steel-truss span with reinforced concrete floor, on concrete abutments. The contract for the substructure and erection of the steel superstructure was awarded to Messrs. Arranz and Concepcion, while the fabricated steel is being furnished by Mr. A. G. Yankey. Due to the nature of the material purchased during construction, it became necessary to revise the original plan for the south abutment by placing this abutment on timber foundation piles, which caused some delay in the completion of the project. At the end of the year 45 per cent of the work had been finished, and it is expected that the bridge will be completed in April, 1929.

San Isidro Bridge, Tarlac Province.—This bridge is being constructed at kilometer 158.33 of the Manila-Tarlac-North road. It consists of five 9-meter reinforced concrete slab and girder spans on reinforced concrete pile bents. The construction of this bridge was contracted by Mr. Manuel G. Palma. While progress of the work has not been satisfactory, it should be finished by February, 1929.

Malaking Ilog Bridge, Tayabas Province.—This bridge will span the Malaking Ilog River at kilometer 125.290 of Candelaria-Bolbok Road. It will consist of two 100-foot steel spans on two reinforced concrete abutments and one center pier. The construction of the substructure, erection of the steel superstructure, and the construction of the reinforced concrete floor slab, including the painting of the bridge, is being done by Mr. Feliciano Nable, contractor. The Atlantic Gulf & Pacific Co. furnished the fabricated steel. This bridge should be completed before the next rainy season.

BUILDINGS—MANILA

The most important insular buildings completed during 1928 are the following:

Normal training department.—This building which forms part of the Normal School group is a 3-story concrete structure, 79 by 11.70, with a hardwood sheathed roof, overlaid with galvanized iron and cement, containing 32 classrooms and offices. Its construction was undertaken by administration at a total cost of ₱270,000, including surcharges, cost of the grading of the surrounding grounds, and the construction of concrete walks.

Insular Psychopathic Hospital.—A group of concrete buildings located in San Felipe Neri, Rizal Province, consisting of two wards for male and female, one administration building, and one kitchen, was constructed by contract for the Insular Psychopathic Hospital. The wards are 2-story buildings, 46.8 by 13, costing ₱230,054.18. The administration building is a reinforced concrete structure, 57.6 by 14.7, comprising a 1-story central unit, with a 2-story cell at either end. It houses the administrative offices, a laboratory and operating room, and quarters for some of the nurses and attendants.

The cost of this building is ₱106,009.45. The kitchen is a 1-story concrete building, 20.60 by 20.60, furnished with cooking facilities. It provides a large dining room for the staff. Its cost amounted to ₱34,648.07.

Contagious-disease pavilions.—Two contagious-disease pavilions, one for the General Hospital and another for the San Lazaro Hospital were constructed and completed by contract at a cost of ₱74,517.97 and ₱75,000, respectively. Both are 34 by 11.50, 2-story concrete buildings, roofed with galvanized iron, and contain suitable wards and private rooms for the isolation of contagious-disease patients. The only difference is that the San Lazaro building has an operating room, while the General Hospital pavilion has none.

PROVINCES

During the year the construction of a large number of public buildings was undertaken in the Provinces, the most important of which are the following:

Marinduque Capitol Building, Marinduque Province.—This building is similar to the capitol building of Negros Oriental, consisting of a 2-story concrete structure 31 by 18, with four concrete columns in front, which make the building appear imposing. It provides ample rooms for the different provincial offices. The construction of this building was contracted by Mr. Yu Chong Tiam, of Manila, at a cost of ₱95,239. The electrical wiring was undertaken by administration. The total cost of the building amounts to ₱104,973, including the cost of supervision and provincial and insular surcharges.

Cabanatuan Presidencia, Cabanatuan, Nueva Ecija.—This is a special plan prepared by the central office for Cabanatuan, consisting of two stories, the first story, which is 22.8 by 12.8, being of concrete, and the upper story of wood. It was constructed by Mr. F. Nable, contractor, for the sum of ₱43,830, excluding the painting of the concrete. The entire cost of the structure is ₱49,072.30.

Paniqui Presidencia, Tarlac Province.—This building is of the Calbayog type, 2-story structure, the first story being of reinforced concrete and the second story of wood. It has a dimension of 12.8 by 24, and is roofed with galvanized iron. It has sufficient number of rooms to accommodate all the offices needed by the municipality. The municipal treasurer's office is particularly ample. The construction of this building was undertaken by administration. The work was started in May, 1928, and the building was completed in the early part of December of the same year, at a total cost of ₱38,624.84.

Munoz Market, Munoz, Nueva Ecija.—With an available fund of ₱42,851.26, the municipality of Munoz started the construction of a special type of modern market building, rectangular in shape, 68.8 by 49.8, with an open court in the middle. It is probably the most elaborate municipal market building ever designed by the bureau. The total cost of the building is ₱42,679.07.

ARTESIAN WELLS

With an insular appropriation of ₱250,000 as aid for the drilling of artesian wells during 1928, it was possible to keep only 14 drilling machines in active operation out of 30 that are owned by the insular government. Ninety-three public wells, with an aggregate depth of 33,909 feet, were drilled, 90 of which were successful and 3 unsuccessful. In addition to the above, two private wells were drilled, one for the Philippines Cold Stores, Manila, and the other for the Canacao Hospital, United States Navy, the total cost of which was paid by the parties concerned.

At the close of the year proper resolutions were on hand from 112 municipalities, requesting the drilling of 254 wells and guaranteeing one-third of the cost of successful wells, as required under the provisions of annual appropriation acts for many years. A substantial increase in the annual insular appropriation will be necessary to take care of the increasing number of requests for the drilling of artesian wells.

From 1904 to 1928 the Bureau of Public Works drilled a total of 2,034 successful public and private wells capable of supplying a total of 49,248,580 gallons of potable water per 12-hour day, which at the rate of 20 gallons per capita can provide a water supply for 2,462,429 people.

BUREAU OF PUBLIC WORKS MACHINE SHOPS

The activities of the machine shop during the years 1928 and 1927, respectively, are shown in the following table:

Year	Number of personnel	Work orders completed	Cost of materials	Cost of labor	Total value of work
1927.....	78	779	P56,393.25	P54,096.58	P110,489.83
1928.....	76	1,026	51,606.70	52,055.07	103,661.77

In accordance with an agreement with the city of Manila, the machine shop is responsible for the maintenance and repair of the artesian wells in the city of Manila, for which work the sum of ₱2,000 was available during 1928.

DESIGNING DIVISION

The past year has been an extremely active one for the designing division, due to the large amount of loan and bond issue funds available for public works in addition to the regular appropriations. Designs for an unusually large number of bridge and port works projects were completed and the work advertised. Noteworthy among the plans completed during the year are those for the Iloilo marginal wharf and Cebu pier and marginal wharf, which are the largest port structures of their kind undertaken in the Philippines outside of Manila. These two projects are being financed from bond-issue funds and will involve a total expenditure of approximately ₱3,000,000.

PORT WORKS CONSTRUCTION AND MAINTENANCE

The work accomplished on the more important port works projects is as follows:

Butuan, Agusan.—A reinforced-concrete pile and girder wharf with timber deck 9.5 meters in width and 22.7 meters in length was completed by administration at Butuan. This wharf, which is located on the Agusan River about 7 kilometers from its mouth, will accommodate vessels of 14-foot draft, but owing to the bar at the mouth of the river it is seldom that vessels of more than 10-foot draft can enter the river. For this reason, it is proposed to investigate the natural harbor at Nasipit with the idea of eventually developing this port for interisland shipping.

Legaspi, Albay.—Investigation and survey of the port of Legaspi were made and preliminary lay-out plans prepared for the development of the port. The proposed work will include the diversion of the Tibu River, the construction of a reinforced-concrete pier and rock breakwater, the dredging of a protected basin for small boats and reclamation of approximately 400,000 square meters of valuable land. This work is estimated to cost approximately ₱1,000,000.

San Jose, Antique.—A reinforced-concrete wharf with wooden deck 9.5 meters in width and 22.7 meters in length and a rock causeway approach 200 meters in length were completed at San Jose. The wharf will accommodate vessels of 20-foot draft. As the only bid received for the construction of this wharf was considered excessive, the work was undertaken by administration and completed within the bureau's estimate.

Tagbilaran, Bohol.—The construction of a concrete pile and girder wharf 9.3 meters in width and 21.4 meters in length which was undertaken by administration in 1927, was completed during the early part of 1928.

Aparri, Cagayan.—Plans and specifications were prepared for a reinforced-concrete pile and precast slab jetty at Aparri to prevent the formation of sand bars at the mouth of the Cagayan River. The work was advertised during the early part of the year, but the only bid received was considered so excessive that the work was eventually awarded in May to Contractor C. Russel on a cost plus 15 per cent basis. Actual construction work was started in October, as soon as weather conditions permitted. In November the Cagayan River swelled and flooded the surrounding areas, causing unprecedented scour during the period of low tide and undermining the 50 linear meters of jetty which had been completed. Most of the concrete piles and slabs, together with

some of the equipment lost, have, however, been recovered and it is proposed to continue the construction on a new location which will be protected from future scours of this nature by permeable dikes on the east bank of the river.

Capiz, Capiz.—Work on the Capiz south breakwater was continued throughout the year under contract with Mr. Gregorio Yotoko. Work on the north breakwater was started by administration and continued until October when lack of funds necessitated the shutdown of work until the release of the 1929 appropriations. On December 31, a total of 851 linear meters of the south breakwater and 116 linear meters of the north breakwater had been completed, leaving approximately 275 linear meters of the south breakwater and 150 linear meters of the north breakwater yet to complete. Work on the breakwaters will be continued during the coming year.

Cebu, Cebu.—Dredging along the Cebu water front was continued throughout the greater part of the year and the dredged materials deposited in the reclamation area.

A length of 407 linear meters of reinforced-concrete marginal wharf, 8 meters in width, located in front of the Cebu reclamation area, was completed under contract by the Atlantic, Gulf & Pacific Co.

Plans and specifications were completed for 203 linear meters of reinforced-concrete marginal wharf, 16 meters in width, and for a reinforced-concrete pier 155.5 meters long and 33.3 meters wide. Bids for these two structures were called for on November 15, 1928, and the contract for the construction of both the marginal wharf and pier was awarded to the Atlantic, Gulf & Pacific Co., on December 27, 1928, for the sum of ₱1,111,650. This work is being financed from the ₱4,000,000 bond issue authorized for the improvement of the port of Cebu. With the completion of this work in 1930, the present congested condition of shipping at the port of Cebu will be greatly relieved.

Cotabato, Cotabato.—Forty linear meters of gravity-type concrete river wall was completed at Cotabato. This wall provides wharfage space for small vessels which enter the Cotabato River. As no bids were received, the work was undertaken by administration.

Davao, Davao.—A reinforced-concrete pier 100 meters in length and 9 meters in width was completed under contract by Contractor C. V. Powers in October, 1928. A contract was awarded the Luzon Stevedoring Co., for placing 6,000 cubic meters of rock in the causeway approach to the pier, at a unit price of ₱5 per cubic meter. Due to the difficulties experienced in the shipment of dynamite, the contractor was unable to open a quarry until late in the year, so that only approximately 100 cubic meters of rock were delivered. The work should, however, now progress very rapidly. With the funds appropriated in the 1929 Budget, it is expected to complete the entire 120 linear meters of causeway. The causeway will have a clear width of roadway of 15 meters.

Iloilo, Iloilo.—During March, Contractor J. W. Ford completed his contract for the construction of 115.5 linear meters of concrete gravity wall which closes the former gap in the river wall below the Iloilo customhouse. The wall was designed for a depth of 18 feet of water and furnishes additional berthing space for interisland vessels in the upper reach of the river.

Because of the slowness with which rock deliveries were being made, it became necessary during the first part of the year to take over the contract originally awarded in 1926 to Messrs. George G. Martin, William Werry, and S. Conway for the delivery of 25,000 metric tons of derrick rock for the jetties at the mouth of the Iloilo River and 12,500 metric tons of derrick rock for the Iloilo spur dikes. In July, contract for the delivery of the remainder of the rock was assigned to the Visayan Stevedoring Transportation Co. at the original contract price of ₱3 per metric ton of rock in place. By the end of the year this company had placed 9,584 tons of rock in the jetties and 1,777 tons of rock in the spur dikes.

The construction of 1,042 linear meters of reinforced-concrete marginal wharf in the Iloilo River was advertised in September, and in November the award of the contract to Tan C. Tee & Co., the lowest bidder, was recommended. Owing to the failure of the insular auditor to furnish a certificate of funds, the award of the contract had not been effected by the end of the year. The contractor has, however, started the collection of materials and equipment at the site. The upstream portion of this wharf for a distance of 264 meters has a width of 8 meters, and is designed to accommodate vessels of 18-foot draft. The remaining 778 linear meters of wharf is 11 meters wide

and is designed to permit of dredging to a depth of 30 feet. The dredging of the river will be undertaken during the coming year so that with the completion of the wharf, oversea vessels will be able to enter the river and dock alongside. It is also proposed to undertake the construction of a marginal wharf in the straits outside the river mouth in the immediate future.

Iligan, Lanao.—Owing to the limited funds available and the fact that there are no local contractors in Lanao with experience in port construction work, authority was obtained to undertake the construction of the Iligan pier by administration. The plans for this project include a rock causeway approach 96 meters long and 6 meters wide and a reinforced-concrete pier 63 meters long and 12 meters wide. At the end of the year the causeway approach had been completed and 42 concrete piles cast. It is proposed to continue this work with the ₱25,000 appropriation carried in the 1929 public works act.

Tacloban, Leyte.—The construction of a reinforced-concrete wharf extension to the present wharf at Tacloban was undertaken by administration during the year. At the end of the year, all the concrete deck had been placed. It is proposed to continue the extension of the wharf with the ₱25,000 appropriation made available by the 1929 public works act.

Manila.—The Atlantic, Gulf & Pacific Co. completed that portion of the south breakwater contemplated by their contract and also undertook the extension of Dewey Boulevard sea wall as extra work in connection therewith. The latter was seriously delayed by questions of audit and could not be completed during the working season. A total of 212,721 tons of rock was placed on both projects during the year at a contract price of ₱2.84 per ton.

The construction yard of Pier No. 7 was removed, and a small amount of work was done on the pier proper toward completion of that project.

The usual work of maintenance of the piers, cargo sheds, breakwater, and river wall was carried on during the year, the total expenditures amounting to ₱90,000. The largest item of expense for maintenance of the piers was occasioned by the necessity of repairing the floors and renewing paving blocks. Expenditures for the upkeep of Pier No. 3 amounted to ₱17,000; Pier No. 5, ₱27,000; and Pier No. 7, ₱15,000. Nearly ₱20,000 was devoted to the repair of the cargo shed and its marginal wharf and ₱9,000 for the maintenance of the Pasig River wall and the adjoining muelle.

A very serious situation developed early in the year through the failure of the steamship *Dredger* and the long delay in making repairs. In consequence, the dredging of the harbor could not be undertaken for 10 months of the year. Attention is again invited to the urgent need of acquiring a new and larger dredge of the same type, if the maintenance of Manila Harbor is to be properly carried on.

Dredge No. 4 was prepared for dispatch to Iloilo late in the year, where it will be engaged at least a year in dredging the river channel.

Pulupandan, Occidental Negros.—Work on the Pulupandan port works project progressed satisfactorily throughout the year. The work is being undertaken under contract by the Atlantic, Gulf & Pacific Co., which was assigned the contract by the Ma-ao Sugar Central Co. The construction of the concrete pier and approach, including the replacement of the old wooden approach with concrete, has been completed. The pier and approach have a total length of 449 meters. The main pier is 151.5 meters in length and 21.75 meters in width and is designed to have a concrete pier shed. Work on the construction of 300 linear meters of creosoted timber sea wall, the reclamation of 10,000 square meters of land, and the construction of 75 linear meters of breakwater, which are included in the contract, is now well under way, and it is expected that the entire project will be completed within a few months.

Dumaguete, Oriental Negros.—The construction of the Dumaguete reinforced concrete pier, contract for which was awarded to Contractor C. V. Powers in November, 1927, was completed at the end of the year with the exception of the asphaltic pavement and fender piles. The pier is 63 meters in length and 12 meters in width and is supported by 50-centimeter reinforced concrete piles. The pier will provide berthing space for two interisland vessels at the same time, which is considered ample for the needs of the port for some time to come.

Lasi, Oriental Negros.—The 100 linear meters of rock causeway previously constructed at Lasi was farther extended 100 meters during the past year. It is proposed to continue the causeway construction for an additional 20 linear meters and construct a small concrete pier at the end to accommodate vessels of 10-foot draft.

Catbalogan, Samar.—Some work on the widening and extension of the Catbalogan causeway was accomplished during the year. Considerable damage to the causeway and temporary landing stage was, however, caused by the November typhoon. It is proposed to repair the damage to the causeway and construct a permanent boat landing for small boats with funds provided by the 1929 public works act. Because of the exposed location of the port, the construction of a pier to accommodate interisland shipping has been abandoned and an investigation will be made at Salanga Bay, a few kilometers north of Catbalogan, with the idea of securing a more protected site for the construction of a pier or wharf.

Zamboanga, Zamboanga.—Some maintenance work on the existing port structures at Zamboanga was undertaken during the year. A total of 111 reinforced-concrete piles was cast for the replacement of the existing wooden wharf approach with a concrete structure. The work of driving the piles will be started in January, 1929, and it is hoped to replace one-half of the wooden wharf approach with a permanent concrete structure during the coming year. The work is being undertaken by administration.

Maintenance and minor port construction.—The maintenance of the existing port structures and minor construction work were undertaken during the year at Cagayan, Province of Misamis; Larena, Province of Oriental Negros; Cuyo, Province of Palawan; Casiguran, Province of Sorsogon; and Jolo, Siasi, Sibutu, and Bongao, Province of Sulu.

DIVISION OF ARCHITECTURE

The activities of this division were substantially increased during the year under review, to take care of the large number of important construction projects, such as the Manila post-office building; the library for the University of the Philippines; the San Lazaro contagious pavilion; Philippine General Hospital contagious pavilion; addition to the dispensary building, Philippine General Hospital; addition to the normal hall; bureau of forestry annex; Pandacan research laboratory; etc., in Manila, and the Albay, Calivo, and Batangas hospital buildings; the Batangas and Occidental Negros capitol buildings; the Laguna provincial courthouse; insular asylum administration building; and other miscellaneous projects.

Studies were made and drawings prepared for numerous other projects, such as the proposed Cebu and Bulacan capitol buildings; the Pampanga Provincial Hospital and new high school building and the new Ilocos Sur High School building.

IRRIGATION DIVISION

Irrigation projects.—There were 3 irrigation projects completed, 3 under construction, 16 in operation, 3 approved for construction, and 65 under consideration during 1928.

The three irrigation projects completed during the past year were the extensions of Angat River, Sibalom-San Jose, and Talavera River irrigation systems. They command an aggregate area of 6,600 hectares and were completed at a cost of approximately ₱425,000. Although the official opening of these projects was not made till the first of the year, they were in operation during the last growing season.

The three systems under construction command an aggregate area of 25,200 hectares and are estimated to cost ₱5,931,750. It is expected that the Penaranda River irrigation project and the Laoag-Vintar irrigation project will be completed in time to deliver water during the next growing season and will place under irrigation approximately 16,000 hectares of land. The south main canal of Laoag-Vintar irrigation project, although uncompleted, delivered water from October 15, 1928, till the crop was harvested, on account of the drought which occurred from the first week of October to the last week of November. The crop thus saved was estimated at approximately ₱300,000.

The 16 Government irrigation systems in operation prior to 1928 command an aggregate area of 61,500 hectares and were completed at a cost of ₱11,764,369.

After providing funds for projects under construction and approved for construction and for improving existing systems, there will be left a balance

of ₱631,838.95 from the ₱20,000,000 bond fund authorized by Act 3011 and section 7 of Act 3013.

TABLE I.—*Irrigation systems in operation*

Name of system	Classification	Province	Date of official opening	Irrigated area (hectares)	Cost of construction	Cost per hectare as advertised	Annual irrigation charge per hectare	Number of years to pay
Aganao River irrigation system.	Insular....	Iloilo.....	Sept. 1, 1924	6,400	₱917,000	₱152.96	₱11.66	40
Amburayan River irrigation system.	—do.....	La Union....	June 1, 1926	4,000	1,156,000	289.00	18.29	40
Angat River irrigation system.	—do.....	{Bulacan and Pampanga.	July 1, 1926	21,000	5,073,769	233.73	15.11	40
Ayala irrigation system. ¹	Municipal		May 1, 1926					
Baruyen River irrigation system.	Insular....	Zamboanga.	Feb. —, 1924	180	17,000	92.89	2.00	-----
Dingras irrigation system.	Insular....	Ilocos Norte.	July 15, 1923	550	89,000	161.52	8.72	40
Naic irrigation system. ²	—do.....	—do.....	Jan. 1, 1923	1,010	130,000	128.20	10.21	40
O'Donnell River irrigation system.	—do.....	Cavite.....	Jan. 7, 1923	680	292,000	431.95	22.26	40
Pilar irrigation system.	—do.....	Tarlac.....	July 1, 1926	4,000	650,000	144.44	20.24	20
Santa Barbara irrigation system.	—do.....	Bataan.....	Sept. 1, 1916	170	27,600	162.39	14.94	40
Santa Maria irrigation system. ³	—do.....	Iloilo.....	Dec. 1, 1922	5,000	692,000	142.70	10.21	40
San Miguel irrigation system.	Municipal	Zamboanga.	Feb. —, 1924	430	23,000	53.39	2.00	Ind.
Sibalom-San Jose irrigation system.	Special....	Tarlac.....	Aug. —, 1913	4,000	789,000	197.25	(⁴)	(⁵)
Tagudin River irrigation system.	Insular....	Antique.....	July 1, 1926	3,400	385,000	111.42	12.92	20
Talavera River irrigation system.	—do.....	Ilocos Sur...	July 15, 1925	1,090	375,000	335.16	20.81	40
Trinidad irrigation system. ⁶	Special....	Nueva Ecija Mountain Province.	Nov. 15, 1923	9,390	1,108,000	146.84	{ 9.20 2.50 }	40
			Jan. —, 1921	200	40,000	200.00	-----	
Total.....	-----	-----	-----	61,500	11,764,369	-----	-----	-----

¹ Operated by municipal council of Zamboanga.

² Operated by bureau of lands.

³ Operated by municipal council of Zamboanga.

⁴ Total, ₱29,000.

⁵ Yearly.

⁶ Operated by bureau of education.

TABLE II.—*Irrigation systems completed during 1928*

Name of system	Classification	Province	Date of beginning construction	Irrigable area (hectares)	Estimated cost	Cost per hectare	Annual irrigation charge per hectare	Number of years to pay
Angat River irrigation system extension. ¹	Insular...	Bulacan....	Apr. —, 1927	4,000	₱250,000	₱62.50	₱15.11	40
Sibalom-San Jose irrigation system extension. ¹	—do.....	Antique.....	Apr. —, 1927	1,100	65,000	59.09	12.92	20
Talavera River irrigation system extension. ¹	—do.....	Nueva Ecija.	Apr. —, 1926	1,500	110,000	73.33	9.20	40
Total.....	-----	-----	-----	6,600	425,000	-----	-----	-----

¹ In operation since June, 1928.

TABLE III.—*Irrigation systems under construction*

Name of system	Classification	Province	Date of beginning construction	Irrigable area (hectares)	Estimated cost	Allotments made	Progress of construction—per cent completed
Dipolog irrigation system.	Insular.	Zamboanga	Aug. —, 1919	1, 000	₱126, 750	₱76, 750	60
Laog-Vintar irrigation system. ¹	do.	Ilocos Norte	Jan. —, 1923	6, 200	2, 505, 000	2, 280, 000	85
Penaranda River irrigation system. ²	do.	Nueva Ecija	Jan. —, 1924	18, 000	3, 300, 000	2, 634, 185	60
Total				25, 200	5, 931, 750		

¹ To be completed June, 1929.² To be completed September, 1929TABLE IV.—*Irrigation systems approved for construction*

Name of system	Classification	Province	Irrigable area (hectares)	Estimated cost
Amburayan River irrigation system extension ¹	Insular	La Union	1, 200	₱250, 000
Balaoan irrigation system ²	do.	do.	1, 000	150, 000
Pampanga River irrigation system ³	do.	Nueva Ecija	20, 500	4, 000, 000
Total			22, 700	4, 400, 000

¹ Construction of this project held pending final action on Balaoan project.² Construction held pending action of provincial board.³ Construction held pending release of funds.

WATER RIGHTS

A total of 215 new applications for water rights was received during the past year, 186 of which were for irrigation, 8 for domestic, 6 for condensation, and 15 for power-development purposes. A total of 117 applications were finally acted upon, 114 of which were granted and 3 disapproved by the honorable the secretary of commerce and communications upon the recommendation of the irrigation council. The water rights granted for irrigation purposes were based on irrigating 18,929.78 hectares of land.

There were 15 applications for the development of power filed during the year 1928. Two applications for power development were approved for developing a maximum of 3,000 horsepower.

There were two streams which were designated for adjudication during the year 1928.

Adjudication on the three streams (Auge, Cogo, and Anondaan and their tributaries) was completed in 1928, making the total number of streams so adjudicated 30.

The irrigation council met twice during the year 1928 and acted upon a total of 117 water-rights applications and one set of rules and regulations for an irrigators' association.

A large number of water-right controversies were investigated by the bureau's personnel and acted upon by the secretary of commerce and communications.

There were some 10,000 certificates of apportionment of water according to priority issued and about 6,000 certificates are still pending.

HYDROGRAPHIC INVESTIGATIONS

Hydrographers of the division made 2,127 discharge measurements and kept daily gage-heights records at 274 permanent gaging stations. No discharge measurements were made at temporary gaging stations during 1928. Systematic gagings of all main canals and some of the larger laterals of government irrigation systems in operation were also made. Records were kept for 31 rain gages established in localities distant from the weather bureau's gages.

SEWERAGE SYSTEMS

The construction of the Vigan domestic sewage system, Ilocos Sur, was reported 25 per cent complete at the end of the year. This project is estimated to cost ₱110,000. The work is being financed from the proceeds of a bond issue by the municipality of Vigan. The construction of the Lucena storm drain system, Tayabas, was reported 95 per cent complete at the end of the year. This project is estimated to cost ₱150,000.

Preliminary plans and estimates of cost have been prepared for the following projects:

1. Cavite storm drain system, Cavite Province.....	₱80,000
2. Cavite domestic sewer system, Cavite Province.....	95,000
3. Cebu domestic sewer system, Cebu Province.....	440,000
4. Lucena domestic sewer system, Tayabas Province.....	120,000
5. Batangas domestic sewer system, Batangas Province.....	95,000
Total.....	830,000

RIVER-CONTROL PROJECTS

There were 15 river-control projects during 1928 for which funds were made available. These projects are enumerated hereunder:

Name	Province	Municipality	Estimated cost	Type of work	Status
Calacran River control..	Albay.....	Libon.....	₱60,000	Dike and sausage boulder dam.	Under construction.
Pansipit River control..	Batangas.....	Batangas.....	8,000	Earth dike.....	Completed.
North protection dike, Angat River irrigation system.	Bulacan.....	Baliuag.....	24,000	do.....	Do.
South protection dike, Angat River irrigation system.	do.....	Quingua and Bustos.	30,000	do.....	Do.
Danao seashore protection.	Cebu.....	Danao.....	30,000	Concrete sea wall...	Under construction.
Molo River control.....	Iloilo.....	Molo.....	36,000	Drainage cut-off channel.	Do.
San Cristobal River control.	Laguna.....	Calamba.....	33,000	Concrete bank revetment.	Completed.
Pagsanjan River control.	do.....	Pagsanjan.....	10,000	do.....	Do.
Amburayan River causeway.	La Union.....	Amburayan.....	32,000	Concrete causeway...	Do.
Boac River control.....	Marinduque.....	Boac.....	10,000	Bank revetment and extension.	Do.
Pampanga River dike...	Pampanga..	San Simon, Arayat, San Luis, Apalit.	25,000	Earth dike.....	Maintenance.
Potrero and Abacan River control.	do.....	Sta. Rita, Angeles, Bacolor, Mexico.	60,000	Channel improvement.	Under construction.
Bayambang dike and bank revetment.	Pangasinan..	Bayambang.....	100,000	Earth dike and concrete revetment.	Do.
Galarin-Urbiztondo dike	do.....	Urbiztondo.....	35,000	Earth dike.....	Do.
Sariaya River control...	Tayabas.....	Sariaya.....	25,000	Channel improvement.	Do.

WATERWORKS

The division prepared plans and specifications for 35 provincial and municipal waterworks projects on which construction work was started during 1928. These projects will furnish potable water to a population of 103,800 at an estimated cost of ₱1,620,600. Preliminary designs and estimates of cost were also made for 33 provincial and municipal waterworks projects, most of which are to be financed from loans. These projects will supply 120,150 people at an estimated cost of ₱2,187,000.

Construction work was completed by district engineers on 15 waterworks projects started during previous years, leaving 75 projects under construction at the end of the year. The completed projects cost ₱641,934.90 and serve a total population of 54,300, while the 75 projects still under way are esti-

mated to cost ₱6,156,100 and will provide potable water supply for 353,555 people.

The status of all waterworks projects completed and under construction are as follows:

TABLE A.—*Waterworks projects under construction*

Province and municipality	Type of system	Population to be served	Estimated cost	Funds available	
				Insular allotment	Municipal allotment
Abra: Bangued improvement ¹ -----	Gravity-----	-----	₱17, 100. 00	₱11, 400. 00	₱5, 700. 00
Albay:					
Dara-ga-Legaspi-----	do-----	20, 000	220, 000. 00	100, 000. 00	50, 000. 00
Bo. San Miguel, Tabaco ¹ -----	do-----	400	3, 000. 00	-----	3, 000. 00
Ligao-Oas ¹ -----	do-----	12, 000	190, 000. 00	50, 000. 00	55, 000. 00
Tabaco-----	do-----	5, 500	46, 000. 00	27, 500. 00	15, 000. 00
Antique:					
Barbaza ¹ -----	do-----	1, 500	19, 000. 00	-----	8, 000. 00
Patnongon ¹ -----	do-----	1, 000	14, 000. 00	-----	10, 000. 00
Sibalom-----	do-----	2, 500	27, 000. 00	18, 000. 00	9, 000. 00
Batangas: Lian-----	do-----	2, 000	4, 500. 00	3, 000. 00	1, 500. 00
Bohol:					
Baclayan ¹ -----	do-----	1, 500	27, 000. 00	18, 000. 00	9, 000. 00
Guindulman ¹ -----	do-----	2, 000	21, 000. 00	11, 000. 00	10, 000. 00
Loon-----	do-----	5, 000	33, 000. 00	22, 000. 00	11, 000. 00
Bulacan:					
Bulacan-----	Pumping-----	6, 000	80, 000. 00	50, 000. 00	25, 000. 00
Hagonoy ¹ -----	do-----	9, 000	80, 000. 00	25, 000. 00	33, 400. 00
Marilao-----	do-----	1, 200	6, 000. 00	4, 000. 00	2, 000. 00
Meycauayan ¹ -----	do-----	6, 000	70, 000. 00	25, 000. 00	25, 000. 00
San Miguel-----	do-----	7, 000	75, 000. 00	50, 000. 00	25, 000. 00
Cagayan: Tuguegarao-----	Gravity-----	10, 000	200, 000. 00	50, 000. 00	112, 500. 00
Camarines Sur:					
Metropolitan waterworks ¹ -----	do-----	14, 000	330, 000. 00	30, 000. 00	213, 813. 18
Pasacao ¹ -----	do-----	1, 000	5, 100. 00	3, 100. 00	2, 000. 00
Capiz: Capiz-Ivisan ¹ -----	do-----	8, 000	186, 000. 00	43, 000. 00	58, 000. 00
Cebu:					
Alegria-----	do-----	1, 000	24, 000. 00	6, 200. 00	5, 889. 00
Carcar improvement-----	do-----	4, 000	30, 000. 00	20, 000. 00	10, 000. 00
Cebu extension to Lahug and Pardo. ¹ -----	do-----	-----	89, 000. 00	-----	50, 000. 00
Minglanilla ¹ -----	do-----	1, 500	12, 000. 00	4, 000. 00	4, 000. 00
Moalboal extension-----	do-----	3, 000	25, 000. 00	-----	8, 400. 00
Iloilo:					
Iloilo metropolitan waterworks-----	do-----	91, 500	2, 100, 000. 00	284, 000. 00	1, 585, 438. 56
Pototan-Dingle-----	do-----	9, 200	209, 000. 00	40, 000. 00	168, 659. 78
Ilocos Norte:					
Badoc-----	Pumping-----	2, 800	37, 000. 00	24, 500. 00	12, 418. 50
Ilocos Norte metropolitan waterworks-----	Gravity-----	34, 300	750, 000. 00	84, 000. 00	425, 794. 90
Ilocos Sur:					
Bantay-----	do-----	2, 500	9, 000. 00	4, 000. 00	2, 557. 49
Cacayan-----	do-----	1, 700	18, 000. 00	9, 000. 00	7, 500. 00
San Vicente-----	do-----	2, 000	30, 000. 00	19, 500. 00	10, 700. 00
Santa Catalina-----	do-----	1, 500	25, 000. 00	13, 200. 00	10, 250. 00
Santa-----	do-----	875	24, 000. 00	16, 000. 00	8, 000. 00
Santiago ¹ -----	do-----	1, 300	18, 000. 00	12, 000. 00	6, 000. 00
Laguna:					
Lumban ¹ -----	do-----	4, 300	22, 000. 00	15, 000. 00	8, 000. 00
Los Banos ¹ -----	do-----	6, 000	20, 000. 00	12, 000. 00	7, 998. 93
La Union: Rosario-----	do-----	1, 050	10, 000. 00	6, 600. 00	3, 570. 14
Leyte:					
Maripipi ¹ -----	do-----	1, 000	4, 500. 00	-----	1, 665. 00
Merida ¹ -----	do-----	1, 000	10, 500. 00	-----	3, 500. 00
Masbate: Aroroy-----	do-----	1, 000	8, 000. 00	5, 000. 00	3, 000. 00
Misamis:					
Cagayan improvement-----	do-----	5, 000	38, 000. 00	-----	34, 339. 25
Cataman ¹ -----	do-----	4, 000	21, 000. 00	14, 000. 00	7, 000. 00
Salay ¹ -----	do-----	2, 000	14, 000. 00	8, 000. 00	4, 000. 00
Mountain:					
Bontoc-----	do-----	2, 000	36, 000. 00	24, 000. 00	12, 000. 00
Lubuagan-----	do-----	1, 200	8, 000. 00	5, 000. 00	-----
Occidental Negros:					
Bacolod-----	do-----	8, 000	202, 000. 00	75, 000. 00	112, 441. 24
Bo. Toboso, Escalante ¹ -----	do-----	800	16, 000. 00	10, 700. 00	6, 000. 00
Calatrava ¹ -----	do-----	1, 500	36, 000. 00	23, 500. 00	12, 500. 00
Murcia ¹ -----	do-----	1, 500	45, 000. 00	10, 000. 00	15, 000. 00
Oriental Negros:					
Liberatad-----	do-----	1, 600	40, 800. 00	27, 200. 00	13, 600. 00
Tanhay ¹ -----	do-----	3, 000	40, 000. 00	12, 000. 00	17, 000. 00

¹ Project started during 1928.

TABLE A.—*Waterworks projects under construction*—Continued

Province and municipality	Type of system	Population to be served	Estimated cost	Funds available	
				Insular allotment	Municipal allotment
Palawan:					
Bacuit.....	Gravity.....	1,000	P3,200.00	P2,500.00	P700.00
Balabac Extension.....	do.....	800	5,000.00	3,200.00	-----
Bo, Bintuan.....	do.....	1,000	5,500.00	2,700.00	1,000.00
Culion.....	Gravity and pumping.....	5,000	45,000.00	39,000.00	-----
Cuyo.....	Pumping.....	800	10,000.00	6,650.00	3,000.00
Oton.....	Gravity.....	330	5,000.00	3,000.00	-----
Pto. Princesa improvement.....	Pumping.....	400	4,500.00	3,000.00	1,500.00
Pampanga:					
Guagua ¹	do.....	6,000	70,000.00	-----	21,777.00
San Fernando ¹	do.....	5,000	70,000.00	25,000.00	30,000.00
Romblon:					
Badajoz ¹	Gravity.....	1,500	24,000.00	4,000.00	9,000.00
Cajidiocan ¹	do.....	1,000	12,000.00	4,000.00	4,000.00
Odiangan.....	do.....	3,000	39,000.00	16,100.00	15,000.00
Tayabas:					
Atimonan ¹	do.....	6,000	102,000.00	14,500.00	50,000.00
Lucena improvement.....	do.....	-----	39,000.00	-----	38,453.39
Catanauan.....	Rain tank.....	-----	5,000.00	-----	4,402.00
Laguimanoc.....	do.....	-----	5,000.00	-----	3,200.00
Bo. Hingoso, Macalelon ¹	do.....	-----	5,000.00	-----	2,000.00
Casiguran ¹	do.....	-----	5,000.00	-----	4,000.00
Polillo ¹	Gravity.....	-----	12,400.00	-----	9,398.64
Agdangan ¹	Rain tank.....	-----	5,000.00	-----	2,000.00
Bo. Sanguirín, Alabat ¹	do.....	-----	5,000.00	-----	2,000.00
Zambales: San Antonio.....	Gravity.....	4,000	54,000.00	3,674.83	(²)
Total.....		353,555	6,156,100.00	1,454,024.83	3,462,567.00

¹ Project started during 1928.² One-third construction cost guaranteed by municipal and provincial board.TABLE B.—*Waterworks projects completed*

Province and municipality	Cost	Population served	Type of system	Daily capacity of system
				<i>Gallons</i>
Abra: Bangued.....	P130,755.85	6,600	Gravity.....	180,000
Albay:				
United States Reservation, Regan Barracks, and Legaspi.....	60,000.00	5,000	Pumping.....	259,200
Camalig.....	12,450.38	2,500	Gravity.....	100,000
Jovellar.....	13,735.49	2,500	do.....	122,000
Guinobatan.....	49,853.81	5,000	do.....	288,000
Antique:				
Bugason.....	18,306.56	2,500	do.....	44,000
Culasi ¹	30,272.95	1,700	do.....	100,000
San Jose.....	41,846.74	4,000	Pumping.....	47,520
Bataan: Sisiman.....	12,138.04	(²)	Gravity.....	37,000
Batangas:				
Balayan.....	7,353.92	2,000	do.....	100,000
Batangas.....	71,529.96	6,147	Pumping.....	144,000
Bauan.....	41,983.96	4,700	do.....	93,600
Cuenca.....	5,000.00	2,500	Gravity.....	5,040
Lemery.....	47,132.84	7,200	Pumping.....	200,000
Lipa.....	103,065.87	5,000	do.....	172,800
Rosario.....	20,232.67	5,000	do.....	223,200
San Jose.....	44,089.45	4,000	Gravity.....	216,000
Santo Tomas.....	27,108.65	1,910	do.....	50,400
Taal.....	91,188.34	5,000	Pumping.....	187,200
Taal extension.....	57,220.41	4,000	do.....	80,000
Talisay.....	15,562.81	2,130	Gravity.....	64,800
Tanauan.....	55,615.02	2,500	do.....	65,000
Bohol:				
Anda.....	16,429.84	2,500	do.....	100,800
Calape.....	26,521.41	2,600	do.....	156,000
Dauis.....	5,100.00	840	do.....	77,760
Duero.....	10,823.56	2,000	do.....	86,400
Inabanga.....	45,362.63	4,000	do.....	160,000

¹ Project started during 1928.² Cattle.

TABLE B.—*Waterworks projects completed*—Continued

Province and municipality	Cost	Population served	Type of system	Daily capacity of system
Bohol—Continued.				<i>Gallons</i>
Jagna.....	P24, 115.26	3, 000	Gravity.....	43, 200
Loay.....	18, 968.72	3, 000	do.....	144, 000
Loboc.....	20, 063.91	3, 000	do.....	61, 900
Mabini.....	6, 750.00	1, 300	do.....	72, 000
Tagbilaran.....	13, 837.47	5, 245	Pumping.....	77, 760
Tubigon.....	37, 094.06	4, 800	do.....	100, 800
Bukidnon:				
Deliric.....	(³)	600	Gravity.....	4, 320
Malaybalay.....	11, 641.16	1, 300	do.....	20, 160
San Luis.....	650.00	500	do.....	
Bulacan:				
Hagonoy.....	7, 564.87	2, 789	do.....	50, 400
Malolos ¹	131, 179.20	6, 000	Pumping.....	360, 000
Marilao.....	22, 101.50	(⁴)	Gravity.....	
Sibul, San Miguel.....	256, 000.00	(⁴)	do.....	
Camarines, Norte:				
Mambulao.....	1, 200.00	1, 823	do.....	
Paracale.....	8, 544.03	2, 500	do.....	100, 800
Capiz: Capiz.....	13, 541.92	6, 400	Rain tank.....	264, 170
Cavite:				
Cavite ¹	111, 691.58	10, 900	Pumping.....	200, 000
Indang.....	39, 627.40	3, 000	do.....	144, 000
Mendez-Nunez.....	60, 700.00	1, 600	do.....	57, 600
Silang.....	36, 154.89	4, 000	Gravity.....	100, 000
Cebu:				
Balamban.....	25, 009.14	4, 800	do.....	72, 200
Barili.....	26, 958.28	2, 067	do.....	61, 200
Carcar.....	64, 004.45	4, 463	do.....	216, 000
Catmon.....	16, 399.56	1, 624	do.....	38, 000
Cebu.....	526, 000.00	65, 000	do.....	806, 400
Cebu-Labangon.....	16, 000.00		do.....	576, 000
Cebu-Sambag.....	35, 789.18		Pumping.....	187, 200
Cordova.....	4, 810.74	1, 191	Gravity.....	30, 000
Daanbantayan.....	5, 672.99	579	do.....	30, 000
Dalaguete.....	14, 941.15	3, 500	Pumping.....	36, 000
Dalaguete extension.....	27, 372.84		Gravity.....	57, 600
Danao ¹	42, 055.89	2, 500	do.....	57, 600
Dumanjug.....	35, 638.29	1, 500	Pumping.....	187, 200
Ginatilan.....	13, 404.80	2, 669	Gravity.....	43, 200
Mainit.....	2, 000.00		do.....	
Malabuyoc.....	14, 941.15	1, 500	do.....	104, 540
Moalboal.....	14, 297.27	2, 103	do.....	54, 720
Naga.....	6, 800.00	3, 233	do.....	79, 200
Naga extension.....	4, 552.48		do.....	
Opon.....	36, 568.44	1, 500	Pumping.....	144, 000
Pilar.....	5, 019.21	702	Gravity.....	14, 400
Poros.....	8, 873.63	1, 000	do.....	21, 600
Samboan.....	7, 514.11	2, 741	do.....	49, 250
San Isidro.....	1, 388.13	650	do.....	34, 560
San Fernando.....	20, 273.17	3, 000	do.....	108, 000
San Francisco.....	6, 200.00	1, 243	do.....	10, 000
Sibonga.....	35, 300.00	2, 651	do.....	63, 360
Sogod ¹	13, 221.44	2, 200	do.....	94, 000
Tuburan.....	55, 335.55	3, 900	do.....	120, 960
Tudela.....	8, 263.29	851	do.....	24, 480
Cotobato: Parang.....	9, 600.00	600	Pumping.....	21, 600
Davao: Davao.....	137, 195.14	6, 000	Gravity.....	86, 400
Ilocos Sur: Vigan.....	127, 399.52	8, 440	do.....	201, 600
Iloilo: San Dionisio ¹	11, 483.82	1, 500	do.....	46, 500
Isabela: Ilagan.....	(³)		Rain tank.....	40, 000
Laguna:				
Alaminos.....	28, 496.85	1, 130	Gravity.....	95, 000
Bay.....	2, 767.72	1, 471	do.....	86, 400
Calamba.....	75, 275.98	7, 000	Pumping.....	288, 000
Lilio.....	35, 528.77	4, 500	Gravity.....	316, 800
Luisiana ¹	50, 708.07	4, 500	do.....	216, 000
Magdalena ¹	68, 549.54	3, 000	do.....	40, 000
Majayjay.....	38, 686.06	3, 200	do.....	187, 200
Nagcarlang.....	36, 034.42	2, 500	do.....	180, 000
Paete ¹	10, 428.77	4, 500	do.....	216, 000
Pagsanjan.....	73, 782.67	4, 044	Pumping.....	233, 280
Rizal.....	26, 777.56	3, 000	Gravity.....	216, 000
San Pablo.....	89, 455.82	7, 000	do.....	576, 000
Sta. Cruz.....	92, 692.43	6, 000	Pumping.....	352, 800
La Union: San Fernando.....	92, 732.94	5, 000	Gravity.....	300, 000
Leyte:				
Baybay.....	72, 889.23	8, 000	do.....	136, 800
Liloan.....	7, 483.63	700	do.....	28, 800

¹ Project started during 1928.³ No data.⁴ Bathhouse.

TABLE B.—*Waterworks projects completed*—Continued

Province and municipality	Cost	Population served	Type of system	Daily capacity of system
				<i>Gallons</i>
Marinduque:				
Boac.....	P6,653.00	1,000	Pumping.....	57,600
Gasan.....	22,124.97	1,400	do.....	144,000
Malbog.....	13,614.29	1,000	Gravity.....	61,920
Mogpog.....	10,535.69	1,280	do.....	18,288
Sta. Cruz.....	20,696.23	2,560	do.....	158,400
Torrijos ¹	23,881.93	5,000	do.....	129,600
Mindoro:				
Abra de Ilog.....	4,743.74	350	do.....	14,400
Bulalacao.....	3,232.08	700	do.....	43,200
Calapan.....	29,743.47	2,500	Pumping.....	57,600
Misamis:				
Balingasag.....	8,924.14	1,514	Gravity.....	57,600
Cagayan.....	50,408.82	3,000	Pumping.....	86,400
Mahinog.....	6,000.00	5,727	Gravity.....	
Mambajao.....	30,000.00	14,446	do.....	
Sagay.....	800.00	6,321	do.....	
Mountain:				
Baguio.....	229,605.89	6,000	Pumping and gravity.	350,000
Cervantes.....	7,565.07	800	Gravity.....	
Mansion House.....	2,144.58	100	Pumping.....	40,000
Teachers' camp.....	(³)	1,500	do.....	216,000
Trinidad farm school.....	19,330.93	300	Gravity.....	36,000
Trinidad stock farm.....	2,000.00	60	do.....	8,640
Nueva Ecija:				
Cabanatuan.....	111,302.49	6,000	Pumping.....	100,000
Munoz agricultural school.....	10,000.00	1,000	do.....	86,400
Oriental Negros:				
Bacong ¹	27,210.48	1,800	Gravity.....	43,200
Basac.....	(³)	265	Pumping.....	
Dauin.....	22,296.01	1,500	Gravity.....	57,600
Dumaguete.....	84,131.43	4,000	Pumping.....	288,000
Guihulngan.....	21,096.31	3,500	Gravity.....	144,000
Larena.....	(³)			
Lazi.....	6,980.77	2,300	Gravity.....	
Luzuriaga.....	12,317.44	2,500	do.....	269,200
Maria.....	1,350.05	1,000	do.....	7,400
Maria extension.....	2,677.41			
Siquijor.....	18,000.00	1,587	do.....	
Siquijor extension.....	(³)	494	do.....	
Talingting.....	5,025.00	2,890	do.....	6,480
Vallehermoso.....	17,390.14	2,500	do.....	115,200
Palawan:				
Coron.....	7,844.63	1,150	Pumping.....	20,160
Puerto Princesa.....	10,268.45	716	do.....	28,800
Pampanga:				
Angeles.....	12,318.52	6,708	do.....	61,920
Arayat.....	35,180.95	3,840	Gravity.....	144,000
San Fernando.....	1,050.02	1,000	Pumping.....	86,400
Pangasinan:				
Alcala.....	3,000.00	2,200	Gravity.....	129,600
Bani.....	12,411.86	2,000	do.....	86,400
Bayambang.....	8,652.80	2,400	do.....	108,000
Dagupan.....	2,823.02	(⁵)	do.....	
Lingayen.....	3,938.99	(⁵)	do.....	
Do.....	9,141.22	(⁵)	do.....	
Do.....	96,682.22	7,000	Pumping.....	288,000
Mangaldan.....	635.53	(³)	Gravity.....	122,400
San Fabian.....	682.87	(⁵)	do.....	57,600
San Manuel.....	38,267.76	4,000	do.....	172,800
Rizal:				
Antipolo.....	23,299.07	2,250	Pumping.....	82,080
Pasig.....	40,000.00	10,000	do.....	86,400
Insular Asylum, San Felipe Neri ¹	13,881.86	1,200	do.....	120,000
Romblon:				
Looc.....	27,760.12	2,000	Gravity.....	144,000
Romblon.....	(³)	2,300	do.....	
Samar:				
Calbayog.....	(³)	(⁵)	do.....	20,000
Catbalogan.....	64,308.94	2,000	do.....	55,000
Oras.....	(³)	4,000	do.....	
Sorsogon:				
Bacon.....	21,000.00	3,200	do.....	79,200
Gubat ¹	76,998.62	7,000	do.....	288,000

¹ Project started during 1928.³ No data.⁵ Market.

TABLE B.—*Waterworks projects completed*—Continued

Province and municipality	Cost	Population served	Type of system	Daily capacity of system
Sorsogon—Continued.				<i>Gallons</i>
Magallanes.....	₱8,000.00	3,500	Pumping.....	.....
Sorsogon.....	70,701.49	6,000	Gravity.....	206,000
Do.....	1,044.67	250	Pumping.....	36,000
Sulu: Jolo.....	76,974.29	5,000	do.....	115,200
Surigao:				
Bo. Bacuag, Gigaquit.....	7,500.00	2,405	Gravity.....	.....
Lianga.....	1,924.58	1,290	do.....	2,880
Placer.....	13,133.95	870	do.....	18,720
Tarlac: Moncada.....	22,122.26	3,000	do.....	86,400
Tayabas:				
Candelaria.....	60,646.04	3,500	do.....	216,000
Calauag.....	4,931.75	.....	Rain tank.....	40,000
Guinayangan ¹	16,073.26	1,500	Gravity.....	86,400
Gumaca.....	4,482.17	1,600	Rain tank.....	40,000
Infanta.....	4,424.55	1,200	do.....	40,000
Lucban.....	50,205.60	3,200	Gravity.....	316,800
Lucena.....	234,390.57	7,500	do.....	262,000
Mauban.....	57,209.32	3,500	Pumping.....	144,000
Mulanay.....	17,369.53	1,200	Gravity.....	180,000
Pagbilao.....	70,538.47	2,300	do.....	54,700
Pitogo.....	4,857.57	.....	Rain tank.....	40,000
Quezon.....	2,959.62	.....	do.....	20,000
Sampaloc.....	22,957.61	3,000	Gravity.....	129,600
San Narciso ¹	14,297.49	1,000	do.....	43,200
Sariaya.....	37,935.00	6,000	do.....	201,600
Tayabas.....	125,159.36	4,500	do.....	173,000
Tiaong.....	49,694.74	1,800	do.....	187,200
Unisan.....	4,490.89	.....	Rain tank.....	40,000
Zambales: Subic.....	10,670.62	1,628	Gravity.....	11,520
Zamboanga: Zamboanga.....	305,561.30	5,000	do.....	504,000
Total.....	6,706,897.76	577,552	.....	20,301,788

¹ Project started during 1928.

BUREAU OF POSTS

ORGANIZATION AND PERSONNEL

Number of offices.—There were in operation at the close of 1928, 965 post offices, 592 money-order offices, 962 postal-savings banks, 462 telegraph offices (including 45 radio stations), or an increase of 22 post offices, 35 money-order offices, 43 postal-savings banks, and 18 telegraph stations (including 5 radio stations) over the corresponding figures of the previous year.

Personnel—number of employees.—The total number of officers and employees in the service of the bureau at the close of the year, exclusive of mail contractors and mail messengers, was 3,765, an increase of 177, or 4.93 per cent over similar figure of the preceding year. This increase is accounted for by the establishment of new post-telegraph offices and radio stations, necessitating the employment of additional force, and the filling of certain positions left vacant in 1927.

Expense for clerical service.—The total expenditure for clerical service was ₱469,500.92, as compared with ₱497,011 for the preceding year, or a decrease of ₱27,510.08, or 5.5 per cent.

FINANCIAL STATEMENT

The total income of the bureau for the fiscal year 1928 amounted to ₱4,347,168.72, or an increase of ₱262,004.73, or 6.4 per cent, over the 1927 revenue, which was ₱4,085,163.99. The most notable increase registered in the sales of stamps, the increase being ₱124,295.56. Up to 1927, indemnity fees, postage on C. O. D.'s and on first and second class mail under permits, and postage-due stamps were included in the receipts on sales of stamps. They are now included in miscellaneous postal receipts which registered an increase of ₱32,306.18. The increase in stamp sales is attributed to the general growth of business, the establishment of 24 new post offices, and the sales of commemorative stamps.

The expenditures amounted to ₱3,650,694.37, or an increase of ₱191,795.06, or 5.5 per cent, over the expenditures for the preceding year. Several factors contributed to this increase in expenditures, among which may be mentioned the increase in business as shown by the increase of revenues by 6.4 per cent, the increase in the number of offices (22 post offices, 36 money-order offices, 43 postal-savings bank offices, and 18 telegraph offices), and the typhoon of last November which badly damaged several telegraph lines.

ACTIVITIES—POSTAL BUSINESS

Receipts.—The revenue derived from sales of stamps, second-class postage, third-class postage, post-office box rent and incidental income amounted to ₱2,249,607.05, while during the preceding year the receipts amounted to ₱2,073,762.45, or an increase of ₱175,844.60, or about 9 per cent. Among the several evident causes for this increase are the issue of the new postage-due stamps, the establishment of 24 new post offices, the surcharging of regular stamps to commemorate the recent "British Far East good will flight" to Manila, the admission of a good number of publications to the second class of mail matter, and the growth of business.

Registered Mail.—A total of 1,942,002 registered articles were accepted during the year, as compared with 1,622,811 articles for 1927, an increase of 319,191 pieces, or 20 per cent. This increase is due to the added business handled in the 24 new post offices established during the year, and to the fact that the public made more use of the system, realizing the advantage of sending valuable documents and articles through the mail.

Insured registered mail.—There were handled during the year 40,062 insured registered articles, valued at ₱826,932.05, for which indemnity fees amounting to ₱10,415 were collected. Compared with the corresponding figures for 1927, there was an increase of 12,435, or 31 per cent, in the number of articles, a decrease of ₱157,510.37, or 16 per cent, in the aggregate value of the articles, and an increase of ₱659.50, or 7.5 per cent in the amount of fees paid.

Domestic collect-on-delivery service.—There were 116,726 C. O. D. parcels posted during the year, as against 141,483 for 1927, a decrease of 24,757, or 18 per cent. The commission fee (exclusive of registration fee and postage) collected on those parcels amounted to ₱29,692.43, as against ₱38,798.95 for the previous year, a decrease of ₱9,106.52, or 23 per cent. The total collections amounted to ₱1,594,924.41, as against ₱1,996,800.58 for the previous year, a decrease of ₱401,876.27, or 20 per cent.

The decrease in the C. O. D. business transacted during the year is traceable to the fact that the Howard-Lux Co., for a number of years one of the heaviest C. O. D. mailers, closed its Manila branch during the middle of the year. Likewise, the operation by big commercial houses in Manila of agencies in some of the big towns like Legaspi, Lucena, Zamboanga, Cebu, Iloilo, Davao, Dagupan, Lingayen, Vigan, Laoag, and others affected the C. O. D. business. People in these parts of the islands, who used to order goods by C. O. D. from Manila are now availing of the services of said agencies.

Exchange of mails with Philippine offices.—The Manila post office received 33,728 mails from Philippine offices as against 34,310 mails for 1927, a decrease of 582 mails, or 2 per cent. The number of pouches of letters received increased from 41,109 in 1927, to 41,513 in 1928, a difference of 404, or 1 per cent. The number of sacks received decreased, 17,022 having been handled in 1928, as against 18,429 in 1927, or a difference of 1,407 sacks, or 8 per cent.

The number of dispatches decreased from 35,300 in 1927 to 33,693 in 1928, a difference of 1,607, or 4½ per cent, while the number of pouches increased from 49,006 in 1927 to 49,462 in 1928, showing a difference of 456 pouches, or about 1 per cent. There was also an increase of 4,407 sacks, or 3 per cent, in the number dispatched, the figures being 145,059 for 1927, as compared with 149,466 for 1928.

Mails handled in railway post offices.—The following table shows the volume of mails handled by railway post offices during the years 1927–28:

	1927	1928	Increase
Pouches received.....	106,917	116,985	10,068, or 8½ per cent.
Sacks received.....	72,337	131,070	58,733, or 44½ per cent.
Letter-packages received.....	256,654	309,677	53,023, or 17½ per cent.
Registers received.....	285,022	310,942	25,920, or 8¾ per cent.
Special-delivery articles.....	71,127	83,819	12,692, or 15½ per cent.

Exchange of mails with the United States.—A total of 198 dispatches were received from the United States, as compared with 191 for the previous year, or an increase of 7 dispatches.

During the year 3,107 pouches of letters, 1,851 pouches, sacks, and cases of registers, and 67,866 sacks and casse of merchandise and printed matter were received from the United States which, compared with the corresponding figures for 1927, show an increase of 343, or 12 per cent, in the number of pouches of letters received, and a decrease of 46, or 2 per cent, in the number of pouches, sacks, and cases of registers received, and 3,122, or 4 per cent, in the number of sacks and cases of merchandise and printed matter received.

The number of Philippine mails dispatched to the United States was 175, while the number dispatched during the preceding year was 165, an increase of 10 dispatches. The mails dispatched consisted of 1,099 pouches of letters, 468 pouches of registers, and 25,890 sacks of registers, as against 1,151 pouches of letters, 686 pouches of registers, 16,829 sacks of registers, or a decrease of 52, or about 5 per cent, a decrease of 218, or about 30 per cent, and an increase of 9,061, or 53 per cent, respectively.

United States insured parcels.—A total of 100,416 insured parcels were received from the United States and possessions, as against 89,252 for 1927, an increase of 11,264 parcels, or a little over 12 per cent. The following is a comparative statement of the parcels received:

	1926	1927	1928
Addressed to Manila.....	45, 916	46, 686	52, 779
Addressed to Provinces.....	39, 469	42, 566	47, 637
Total.....	85, 385	89, 252	100, 416

United States air mail.—A total of 10,098 letters weighing 2,416 ounces on which ₱642.30 was collected were dispatched to San Francisco, Calif., and Seattle, Wash., addressed to different points in the United States to be carried by airplane from the above-mentioned places. These, compared with the corresponding figures for 1927, show an increase of 751 in the number of letters, 902.5 ounces in the aggregate weight, and ₱429.38 in the amount of postage collected.

During the year, the United States air-mail rate was considerably reduced. The zone method of collecting postage was discontinued, and a flat rate of 10 centavos for the first ounce and 20 centavos for each additional ounce, or fraction, was fixed. This low rate is perhaps responsible for the increase in the number of letters accepted during 1928. But we continued collecting the additional regular postage on each article plus the service fee of 6 centavos. Steps are now being taken to include the regular postage in the air fee and to abolish the collection of the service fee.

Domestic air mail.—During the year, the Philippines was visited by four flying ships of the British Royal Air Force which started from London on an observation flight to the Orient. The visit of these planes to the Philippines was made the occasion for the issuance of commemorative postage stamps, which were placed on sale at Manila beginning November 9, 1928, the date of their arrival in this city. Stamps were surcharged in red ink with a diminutive seaplane with the letters L. O. F. (London-Orient flight) immediately above and the year 1928, immediately below.

A significant event in connection with this visit of the British flying boats was the carrying of mail for the first time by plane from the Philippines to Hong Kong across the China Sea, an event which may be considered as the forerunner of future Philippine-China air mail service. In fact this was the first mail sent by one postal administration to another across the China Sea. The Gallarza-Loriga flight from Macao to Aparri in 1926 did not carry a regular dispatch of mail from that post office to the Philippines.

Exchange of mails with foreign countries.—A total of 15,683 international parcel-post articles were received during the year, as against 17,077 parcels in 1927, a decrease of 1,394 parcels, or 7 per cent. The articles were received as follows:

	1927	1928
From oriental countries.....	11, 115	10, 351
From European countries.....	5, 962	5, 332
Total.....	17, 077	15, 685

This administration sent to foreign countries 6,632 ordinary parcel-post articles and 4,341 registered, a total of 10,973 parcels. As those sent during the preceding year consisted of 5,504 ordinary, and 3,271 registered parcels, or a total of 8,775, there was an increase of 2,198 parcels, or 25 per cent.

The parcels were dispatched as follows:

	Ordinary	Registered	Ordinary	Registered
To oriental countries.....	3, 844	2, 808	3, 754	3, 628
To European countries.....	1, 660	463	2, 878	713
Total.....	5, 504	3, 271	6, 632	4, 341

During the year, 622 dispatches of mails to foreign countries, consisting of 7,905 bags, was made, as against 533 dispatches consisting of 7,830 bags for 1927, an increase of 89, or 16 per cent in the number of dispatches, and 70, or 1 per cent, in the number of bags sent. On the other hand, this service received 524 dispatches of mails consisting of 15,234 bags, which, compared with the corresponding figures for the preceding year, show an increase of 43, or 1 per cent, in the number of dispatches, and 902, or 5 per cent, in the number of bags.

First and third class matter mailed under permits.—At the close of the year, 42 firms and government offices were holding permits to mail first-class mail matter without postage stamps affixed, as against 31 in 1927, or an increase of 11 permits, or about 32 per cent. The amount collected in 1928 on first-class permits was ₱23,339.92, as against ₱11,959.82 in 1927, or an increase of ₱11,380.10, or about 100 per cent.

At the same time, 105 commercial firms were holding permits to post third-class matter without postage stamps affixed, as against 82 permits in 1927, or an increase of 23 permits, or over 25 per cent. The amount collected from third-class permits was ₱17,979.81 in 1928, as against ₱12,897.25 in 1927, an increase of ₱5,082.56, or about 40 per cent.

The mailing of letters and packages under the permit system affords convenience and saves this office and the mailers considerable time and labor. This is undoubtedly the reason why more persons and commercial firms, including some government offices, are taking advantages of this system of mailing.

Second-class mail matter.—At the opening of the year, there were 165 publications actually registered and enjoying the second-class mail privilege, 18 of which were discontinued up to December 31, 1928. Of those discontinued 10 were Manila publications and the other 8 were provincial papers. There was no change in the number of news dealers with permit to mail publications at the second-class rate of postage, the number remaining 7.

Twenty-five new publications were admitted to the second-class mail matter, 13 of which being in Manila and the rest in the Provinces. There remained entered upon the records of this office as enjoying the privilege of the second-class mail up to and including December 31, 1928, a total of 172 publications, or an increase of 7 publications, or 4.3 per cent.

There has been a steady increase in the number of publications entered as second-class matter during the last five years, as may be seen from the following table:

Year	Number	Increase	Decrease	Percentage
1924.....	131	-----	(4)	(3)
1925.....	142	11	-----	8.4
1926.....	148	6	-----	4.2
1927.....	165	17	-----	11
1928.....	172	7	-----	4.3

The amount of second-class postage paid was ₱72,676.65, as against ₱66,089.74, for the preceding year, an increase of ₱6,586.91, or 10.8 per cent.

The total number of copies of second-class publications mailed was 46,530,864, as compared with 41,420,400 copies mailed during 1927, an increase of 5,110,464 copies, or 4.3 per cent. There was an average of 3 copies to each inhabitant.

MONEY-ORDER SERVICE

A direct exchange of postal money orders between the Dutch Indies and the Philippine Islands was established on April 1, 1928.

In the month of April of the same year, the postal administration of the Kingdom of Siam proposed the establishment of a direct exchange of postal money orders between that country and the Philippines. The proposition was accepted in principle, and in all probability the formal agreement would be concluded and the exchange inaugurated by the middle of the current year.

The total number of orders issued was 1,251,217, as against 1,173,465, for the previous year, an increase of 77,752, or 7 per cent. The aggregate value of these orders was ₱56,570,490.30, as against ₱52,682,829.70 for the previous year, an increase of ₱3,887,660.60, or 7 per cent. The fees received for these orders amounted to ₱317,438.96, as against ₱296,838.68 in the previous year, an increase of ₱20,600.28, or 7 per cent.

The total number of domestic and foreign money orders paid and repaid in this service was 1,249,126, as against 1,175,274 in the previous year, an increase of 73,852, or 6 per cent; and the aggregate value of these orders was ₱66,326,398.64 as against ₱59,063,765.74 in the previous year, an increase of ₱7,262,632.90, or 12 per cent.

During the year there was a decrease of ₱10,448.70, or 0.6 per cent, in the value of orders sent out of the Philippine Islands, the aggregate amount of orders sent being ₱1,669,047.72, as against ₱1,679,496.42 for the previous year. On the other hand the value of the United States and foreign money orders paid in the Philippine Islands had registered an increase of ₱3,548,230.14, or 44 per cent, over the previous year, the aggregate amount paid being ₱11,581,863.72, as against ₱8,033,633.58 for the previous year. Of this amount, ₱6,658,053.48 represented the aggregate amount of money orders issued in the Territory of Hawaii alone, and paid in this service. At the close of the year covered by this report, the balance of the exchange of money orders with the United States and its possessions and other foreign countries was in favor of the Philippine Islands by ₱9,912,816. The big increase in the amount of money orders issued in the United States and its possessions and other foreign countries which were paid in this service, was attributable to the big number of Filipino laborers emigrating to the United States and its other insular possessions, principally the Territory of Hawaii, who used the money order service in making remittances to their families here. This is borne out by the fact that more than one-half of the foreign money orders paid in this service originated from the Territory of Hawaii.

As a whole, it may be stated that the business during the year had been very satisfactory with the exception of money orders issued in the Philippine Islands payable abroad which had shown a little decline. There was again an increase in the volume of our domestic business. This continuous increase may be attributed to the gradual improvement of the domestic commerce and to the growing popularity of the money order service among the people in the islands, especially in localities where there are no banking facilities.

Telegraphic transfer service.—The total number of telegraphic transfers issued during the year was 79,228 as against 77,814, for the previous year, an increase of 1,414, or 2 per cent. The aggregate value of these transfers was ₱13,641,999.66, as compared with ₱12,563,414.64, for the previous year, an increase of ₱1,078,585.02, or 8 per cent. The fees received for these transfers amounted to ₱62,745.89, as against ₱58,240.71 for the previous year, an increase of ₱4,505.18, or 7.7 per cent. The fees did not include the tolls for the telegraphic transfer messages.

The total number of transfers paid was 78,533, as against 76,916 for the previous year, an increase of 1,617, or 2 per cent. The aggregate value of these transfers was ₱13,633,927.09, as against ₱12,541,295.23 for the previous year, an increase of ₱1,092,631.86, or 8.7 per cent.

During the year there were 2,814 transfers paid at the addresses of the payees, as against 1,513 for the previous year, an increase of 1,301 transfers,

or 85 per cent, and the amount of home-delivery fees collected was ₱1,125.60 as against ₱606.40 for 1927, and increase of ₱519.20, or 85 per cent.

POSTAL SAVINGS BANK

At the close of the year there were 289,145 depositors with deposits amounting to ₱8,092,516.13, an increase over the previous year of 59,645 depositors, or 25 per cent, and ₱1,243,349.54, or 20 per cent, in the amount of deposits. Of these accounts, 281,644 were by Filipino depositors, an increase of 59,307 over last year, or 26 per cent, and the rest by Americans, Europeans, and orientals.

The average deposit on each account during the year was ₱27.64, while the per capita deposit was ₱0.51.

The number of new accounts opened was 73,554, an increase of 19,705, or 36 per cent, while the number of accounts closed was 13,909, an increase of 1,788, or 14 per cent. The new accounts opened had a total deposit of ₱1,158,446.68. The withdrawals numbered 88,976, amounting to ₱5,325,480.81, as against 80,714, amounting to ₱4,851,384.15, for 1927, an increase of 8,262, or 10 per cent, in the number of withdrawals and ₱474,096.66, or 9 per cent, in the amount withdrawn.

The total income amounted to ₱504,121.22, an increase of ₱43,208.32, or 9 per cent, over that of the previous year. The cost of administration was ₱119,661.95, as against ₱110,023.88, of the previous year, an increase of ₱9,638.07, or 8 per cent. This slight increase in cost of administration is due to the salary paid to additional force employed to cope with the increased business of the bank, the cost of operation of the 43 additional bank offices established during the year, and the expense for repairs on mortgaged properties foreclosed to the bank. The net earnings amounted to ₱141,629.98, showing a decrease of ₱3,974.59, or 6 per cent.

Investment.—The investment of the funds for the postal savings bank was as follows:

Classifications	1927	1928	Increase
Bonds:			
Philippine Railway Co.....	₱505,000.00	₱505,000.00	(1)
Manila Railroad Co.....	323,875.50	323,875.50	(1)
City of Manila.....	460,000.00	460,000.00	(1)
Fixed assets: Foreclosed mortgages.....	58,832.45	88,388.62	₱29,556.17
Other investments:			
Real-estate loans.....	3,283,676.51	4,023,850.93	740,174.42
Provincial and municipal loans.....	1,240,638.00	1,974,674.00	734,036.00
Retirement gratuities.....	43.51	(1)	243.51
Total of bank investments.....	5,872,065.97	7,375,789.05	1,503,723.08

¹ None.

² Decrease.

Deposits of surplus funds.—The funds of the postal savings bank are being deposited in the Philippine National Bank, earning interest at the rate of 4½ per cent per annum. The total sum on deposit so far amounts to ₱2,176,800.06, of which ₱1,745,000 represent the capital deposited, and ₱431,800.06 the interest earned since April, 1925. The total deposit made during the year under review amounted to ₱605,328.95, of which ₱520,000 represent principal and ₱85,328.95 interest earned.

MAIL TRANSPORTATION

Overland transportation.—With the increasing number of motor-vehicle operators in the islands, this bureau was able not only to employ faster means of transportation for the mails and establish more frequent service in certain localities, but to effect as well a saving of ₱8,672.04 in the expense for mail transportation by automobile and trucks.

A more frequent service by boats has been organized by utilizing practically all sorts of crafts available and by systematic routing of mails.

Much has been accomplished toward the improvement of the railway-mail service. Additional mail exchanges have been authorized, the most important of which is the Manila-Vigan special mail. With this arrangement, mail com-

ing from either point reaches destination in 24 hours, which is almost a day earlier than through the regular mail.

Transportation by railroad.—The year 1928 registered the heaviest mail transported by railroad. This is due to the opening to regular traffic of roads traversing vast areas beyond the railroad lines heretofore depending mostly on water transportation and the establishment of boat routes connecting with train routes.

The transportation of mails by railroad has been carried to such an extent that the Island of Luzon, from Aparri (Cagayan) to Sorsogon (Sorsogon) is now served almost exclusively by trains, with Manila as the principal distributing center.

During the year two additional railway post offices were established, one on the Batangas branch of the Manila Railroad Co. and the other on its Naic line, covering a total distance of 156 kilometers. In all, there are now eight railway post offices, covering a total distance of 1,062 kilometers.

Mail was transported over 1,867,266.8 kilometers of the lines of the Manila Railroad Co. and Philippine Railway Co., at a cost of ₱132,628.26, an increase of 96,429 kilometers, or 5.16 per cent, and ₱4,157.38, or 3.1 per cent, respectively, over the figures for the previous year. The increase in kilometrage was due to the absence of any appreciable interruptions, and by the use of additional trains, two new railway post offices having been established during the year. However, the average rate of compensation paid was ₱0.0015, or 2 per cent, less, the average rate for 1928 being ₱0.0710 as against ₱0.0725 for 1927.

Transportation by electric cars.—In Manila a portion of the mail carried over 33,334.17 kilometers of the Manila Electric Co.'s line as against 33,423.08 kilometers for the year 1927, a decrease of 88.91 kilometers, or $\frac{1}{2}$ per cent. The cost of this service amounted to ₱1,094.38 as compared with ₱1,096.54 for the preceding year, or a decrease of ₱2.16, or about $\frac{1}{5}$ per cent.

Transportation of mail by automobiles and trucks.—During the year mail was transported by automobiles and trucks over a distance of 3,457,677.9 kilometers, at a cost of ₱110,637.48, as against 2,712,111.6 kilometers, at a cost of ₱119,836.85 for the preceding year, or an increase of 745,566.3 in kilometrage, or 27 $\frac{1}{2}$ per cent, a decrease of ₱9,199.37, or 7 $\frac{3}{4}$ per cent in cost.

Transportation by boats.—Every opportunity was taken advantage of, and no effort spared, in making mail connections by indirect boats having no fixed schedules, which advanced mails to certain points in the islands. Among the improvements introduced in this regard the following may be cited: Formerly mails for Tacloban and other places of which Tacloban is the distributing center were merely dispatched by direct regular boats, which leave Manila on Saturdays and arrive at Tacloban on Mondays, and by direct irregular boats. At present mails for Tacloban are sent to Cebu on Wednesdays to be dispatched from this point on boats leaving for Tacloban on Fridays and arriving at destination on Saturdays. Tacloban, on the other hand, dispatches mails for Manila through Cebu on Saturdays, this latter point forwarding such mails by boats leaving on Sundays and arriving at Manila on Mondays. With this special arrangement the frequency of the regular mail service between Manila and Tacloban has been increased from once to twice a week.

Mails for southern Leyte, which were formerly routed via Cebu only, are now being sent also through Tacloban, thus increasing the frequency of service to this region.

At present towns in northern Samar, besides receiving Manila mails on direct boats, also receive such mails via Sorsogon and Legaspi.

Much more has been done in this respect with regard to mails for islands around Luzon, such as Polillo, Alabat, Catanduanes, Ticao, Marinduque, Mindoro, and Lubang.

Mail routes.—There were 682 routes in operation during the year, as against 570 of the preceding year, an increase of 112 routes, or 19 $\frac{3}{4}$ per cent. Of these routes 409 are between post offices; 261 between post offices and mail boats and mail trains. The cost of transportation of mail over 12 of the routes between post offices was borne by the municipalities benefited.

TELEGRAPH BUSINESS

Total volume of telegraph business handled.—The total number of messages handled in 1927 being 1,276,778 and the tolls thereon ₱1,359,000.10, there was in 1928 a decrease of 12.3 per cent in the number of messages (157,742) and

3.2 per cent in the amount of tolls (₱44,140.80), which was largely due to the transfer of certain domestic business to the Radio Corporation of the Philippines, and to interruptions of the service.

Telegraph receipts and expenditures.—The total revenue of the telegraph division, which consisted of the telegraph tolls above-mentioned and of miscellaneous receipts amounting to ₱18,840.30, was ₱1,333,699.60, or a decrease of ₱39,427.38, or 2.8 per cent, as compared with the revenue in 1927 which was ₱1,373,126.98. The expenditures amounted to ₱1,365,248.37, consisting of ₱1,193,268.15 charged to general appropriations and ₱171,980.22 charged to special public works fund. There was, therefore, a decrease of ₱5,853.29, or 0.4 per cent, the expenditures in 1927 being ₱1,271,102.61, including ₱206,227.51 charged to special public works fund.

There was a loss of ₱31,548.77. In 1927 there was a net profit of ₱102,024.37 after deducting all expenditures that were chargeable to the general appropriations and the special fund. This loss was due to the transfer to the radio corporation of certain domestic business, to the interruption of the service, and to the less favorable conditions in 1928.

Combined telegraph-telephone service.—During the year 8,454 combined telegraph-telephone messages were handled, or a decrease of 638, or 7 per cent, as compared with the number handled in 1927, which was 9,092.

Special telegraph-telephone service.—The special telegraph-telephone service is different from the combined telegraph-telephone service in that, under the former, telegrams for transmission are directly received by telephone from the subscribers, and those received for delivery are also telephoned to the addressees directly; while, under the combined telegraph-telephone service, telegrams for transmission must be filed by the senders with the municipal treasurer, and those received for delivery are telephoned by the postmaster to the municipal treasurer.

The special telegraph-telephone service was established in Manila on March 26, 1928, for the convenience of those users of the telegraph service, in the city of Manila, who reside in places far from the telegraph office, especially on Sundays and holidays and at night when there is no messenger delivery service. By means of this service any person who has a telephone in his office or at his residence, in any part of the city, or in any of the neighboring towns, may transmit or receive his telegram by telephone.

Before the establishment of this service, there were many persons who had standing requests for the delivery of their telegrams by telephones outside of office hours. These persons were notified of the establishment of the special telegraph-telephone service, and of the fact that telegrams would no longer be delivered by telephone to those who had not filed the necessary application.

At the close of the year, there were 49 subscribers. The guaranty deposits received amounted to ₱580. There were received for transmission 753 telegrams, on which telegraph tolls amounted to ₱1,005.95 and the telephone charges to ₱181.26. There were delivered 843 telegrams, on which the telegraph tolls amounted to ₱1,302.29 and the telephone charges to ₱188.68.

Night lettergram service.—There were filed for transmission 1,056 night lettergrams containing a total of 54,656 words, the tolls on which amounted to ₱1,572.35, or a decrease of 34.8 per cent in the number of messages, 8 per cent in the number of words, and 4.1 per cent in the amount of tolls, the 1927 figures being 1,635 lettergrams, 59,433 words, and ₱1,639.97 in tolls. The service was in operation at Manila, Baguio, Cebu, Iloilo, Dagupan, Guinayanagan, Ibaday, Lucena, Legaspi, Masbate, Romblon, and Bogo. During the latter part of the year the service was extended to Naga, Camarines Sur, and to Capiz, Dumaguete, Davao, Zamboanga, Aparri, and Ilagan.

Ship radio service of bureau of posts stations.—There were exchanged between ships and our coastal stations 3,778 paid messages containing a total of 59,760 words, as against 2,923 messages and 46,298 words handled in 1927. There was, therefore, an increase of 44 per cent in the number of messages and 29 per cent in the number of words.

From 1923 to 1927 our radio stations rendered service to 12 ships in distress by picking up their distress calls and communicating same to other ships and to the authorities, thus bringing the needed help. During the year 1928 our stations were again of service in the following cases:

Steamship Kyokkoh Maru.—On September 12, this steamer became stranded in the Sibutu Passage. Our radio station at Jolo communicated the distress signal, through radio Sandakan, to the steamship *Kinabalu*, which immediately came to the assistance of the stranded ship.

Steamship Don Jose.—At about 7 a. m. on September 13 our radio station at Cebu picked up a call for help from the steamship *Don Jose*, which had been disabled at a point about 12 miles south of Capitancillo Island. The signal was broadcasted by radio Cebu. At about 8 a. m. report was received that the steamship *Luzon* was speeding toward the place indicated to tow the *Don Jose* to the port of Cebu.

Steamship Saka Maru.—This steamer ran aground off the west coast of Masbate at about 7 a. m. on November 23. Our radio station at Iloilo picked up the distress signal and broadcast it for the information of other steamers. At 9:30 a. m. of the same date radio Iloilo reported that the *Steel Navigator* was proceeding to the assistance of the *Saka Maru*. At 6:30 a. m. November 24 another report was received that the U. S. S. *Memphis* was aiding the stranded ship.

Steps are being taken to improve the ship service of our coastal stations by revising their schedule and by assigning additional operators at Basco, Batangas, Legaspi, Cebu, Iloilo, Zamboanga, and Davao, in order to keep these stations on watch for ships at night in addition to the regular day service. Steps are also being taken to install a radio station at Romblon exclusively for communication with ships at any time of the day or night. A radio station at Romblon would undoubtedly be most convenient for ships to communicate with.

FOREIGN CABLE AND RADIO SERVICE

Eastern Extension Cable.—During the year, we turned over to the Eastern Extension Australasia & China Telegraph Co. (Ltd.), a total of 4,483 cablegrams for abroad, or a decrease of 1 per cent, as compared with the number handled in 1927, which was 4,530. For these cablegrams, we paid the company ₱30,572.83, as against ₱35,933.49 paid in 1927, or a decrease of 14.9 per cent. This company turned over to the bureau of posts, for transmission to the Provinces, 3,146 messages from abroad, as against 3,172 the previous year, or a decrease of 0.8 per cent. For these, the company paid us ₱5,498.16, or an increase of 0.2 per cent, over the amount paid in 1927, which was ₱5,486.56.

Commercial Pacific Cable.—To the Commercial Pacific Cable Co., we turned over 2,082 cablegrams for abroad, paying therefor ₱23,617.95, or a decrease of 3.5 per cent in the number of messages and 12.6 per cent in the amount of tolls, the number of messages in 1927 being 2,159 and the tolls ₱27,046.25. There were turned over to us by this company 3,568 messages for transmission to the Provinces, paying us therefor ₱5,773.91, or an increase of 8.1 per cent in the number of messages and 9.7 per cent in the amount of tolls, the previous year's figures being 3,300 messages and ₱5,262.50.

Radio Corporation of the Philippines.—This corporation opened its transoceanic radio service on June 28, 1927. During the year 1928, we turned over to the corporation 822 messages, of which 66 were for ships and the rest for points abroad. The Radio Corporation turned over to us 1,413 messages, of which 392 were from ships and the rest from other countries. We paid the corporation ₱7,057.54 and the corporation paid us ₱1,925.97, or an increase of 102.5 and 53.8 per cent, respectively, the previous year's figures being ₱3,484 and ₱1,251.80.

The establishment of the corporation's transoceanic service resulted in the reduction of the rates of the two cable companies and has undoubtedly benefited all users of the cable service. From the above figures, however, it appears that, during the year just closed, the cable companies handled the greater part of the telegraph business between the Provinces and points abroad. Of course, these figures do not include messages for and from other countries handled by the radio corporation's feeder stations at Cebu and Iloilo, which were opened for business during the months of August and October, respectively. The total of 15,056 messages for and from foreign countries that passed through our offices were distributed as follows: 7,629, or 50.6 per cent, via Eastern Extension Cable; 5,650, or 37.5 per cent, via the Commercial Pacific Cable; and 1,777, or 11.9 per cent, via the Radio Corporation.

Naval communication service.—We turned over to the naval station at Los Banos a total of 312 messages and received from it 5,186, or a grand total of 5,498, which, compared with 5,979 of the previous year, meant a decrease of 8.04 per cent. This business consisted almost wholly of press dispatches.

Radio service between Philippines and British North Borneo.—The direct radio service between the Philippines and British North Borneo, through radio Zamboanga and radio Sandakan, was established on April 9, 1920. During the year under review, 373 messages containing 3,403 words were exchanged between Zamboanga and Sandakan, or an increase of 42.9 per cent in the number of messages, and 48.4 per cent in the number of words. The tolls amounted to ₱1,228.36 for us and ₱1,179.68 for British North Borneo, as against ₱829.92 and ₱623.36 the previous year, thus showing an increase of 48 per cent for the Philippines and 89.2 per cent for British North Borneo.

Telegraph line and submarine cables.—New telegraph lines, with a total wire length of 449.25 kilometers, were constructed during the year. The most important are that between Naga, Camarines Sur, and Tabaco, Albay; that between Echague and Ilagan, Isabela, and the one between Iloilo and Pototan, Iloilo, improving, as they did, the service in those Provinces.

In addition to 264 kilometers of telegraph lines, which were reconstructed or improved, we rebuilt those destroyed or damaged by the typhoon of November 23, which were approximately 6,642 kilometers in length over a total pole line of approximately 3,644.89 kilometers.

There were removed or discontinued 248.5 kilometers of lines, including the telephone line of the Province of Bukidnon, which had been converted into a telegraph circuit before.

The Dumaguete-Larena and Talisayan-Sagay cables, 21 and 16.01 nautical miles in length, respectively, were discontinued from service when they became interrupted as it was more economical to replace them with radio stations. Of the total length of 37.01 miles, the cable ship recovered 34.42.

No new cable was laid, but, in the course of repairs, some cables were lengthened by 6.85 nautical miles.

At the close of the war, we had in operation 13,475.99 kilometers of telegraph wires, or an increase of 200.75 kilometers over those in operation at the close of the previous year. The submarine cables in operation were 1,057.54 kilometers long, as compared with 1,113.47 at the close of the year 1927. All in all, however, there was an increase of 144.92 kilometers in the total length of telegraph wires and submarine cables, which were 14,531.63 kilometers in 1928, and 14,386.71 in 1927.

Submarine cable repairs.—Twenty submarine cables were repaired 31 times during the year, the faults ranging from "heavy escape" to "complete break." The cable that suffered the most interruptions was the one between Placer and Daan Bantayan, which had to be repaired four different times before the end of the year. As this cable was one of those to be replaced with the heavier type from England, it was decided not to repair it any more after it became interrupted for the fifth time. The interruptions were due to the cable being already worn out. The circuit No. 18 cable between Dumaguete and Cebu was next to the Placer-Daan Bantayan cable in number of interruptions. It had to be repaired three times during the year. Six of the 20 cables repaired were fixed two times each, and 12 only once each.

New submarine cables and new cables ship.—The bureau of insular affairs closed on December 22, 1927, the contract with Siemens Bros. & Co., London, England, for 200 nautical miles of cable. An additional order for 100 miles was made in 1928. According to the bureau of insular affairs, it would cost ₱163,300 to charter a cables ship to bring the cables from London to Manila, and that it would not be advisable to have the cables transported by any boat other than a cables ship. Believing that with about ₱163,300 we might be able to buy a cables ship that would also bring the submarine cables to Manila, a cablegram was sent to the bureau of insular affairs on December 21, 1927, requesting not to close any contract for chartering a cables ship, but to find out if a small cables ship could be purchased for an amount close to that quoted for the charter.

Policy of replacing certain submarine cables and telegraph lines with radio stations.—The policy of gradually replacing certain submarine cables and telegraph lines with radio stations, wherever practicable and absolutely necessary, was continued during the year. When the submarine cable between Dumaguete and Larena became interrupted in 1928 and repair work was found difficult, steps were taken to put a small radio station at Larena, and the cable was removed. The submarine cable between Talisayan, Misamis, and Camiguin Island, was likewise removed during the year and was replaced with a radio station at Mambajao.

In previous years, several other radio stations were installed in place of cables and landlines that were not carrying heavy traffic. The Batangas-

Calapan submarine cable was removed in 1922 and replaced with a radio station at Calapan. The Surigao radio station was installed in 1924 in place of the long circuit of cable and land line between Surigao and Liloan, Leyte. The one at Virac, Catanduanes, was also installed in 1924 in place of the long circuit of cable and land lines between Virac and Tabaco, via Calolbon and Malina, Albay. The long land line between Wright and Taft, Samar, which had always been costly and difficult to maintain, was replaced in 1926 with the present radio stations at Catbalogan and Borongan. The station at Butuan, Agusan, and the one at Dapitan, Zamboanga, both installed in 1927, made possible the discontinuance of the long land lines between Butuan and Gnigoog and between Dapitan and Baliangao, which had frequently been interrupted, traversing, as they did, a very rough region.

There are several other places where radio stations can be used to better advantage than the existing cables or land lines. With the very recent improvements in radio communication which make it possible now to install a radio station at a cost of only a very small fraction of what it cost before and without the necessity of erecting tall steel towers and of constructing elaborate buildings, such as those that were required a few years ago before the present stations at Bongao, Siasi, Cagayan de Sulu, Mati, Lebak, Malita, Balabac, San Francisco de Camotes, Cebu, Iloilo, Basco, and Batangas, could be installed, submarine cables and land lines that are not being used by many officers would be replaced with radio stations whenever practicable.

Short-wave stations at Pasay, Cebu, Iloilo, Zamboanga, Davao, etc.—The short-wave radio apparatus installed in 1927 at Pasay, Legaspi, Cebu, Iloilo, Zamboanga, Davao, etc., have worked much better than they did in 1927. Two additional sets bought from the Army were temporarily installed at Pasay, but one of them was later removed and installed at Tacloban, Leyte, to provide emergency means of communication when the land lines and submarine cables were destroyed or interrupted by the November typhoon.

Radio laws and regulations.—The radio situation in 1928, though better in some respects than that in previous years, was still unsatisfactory in other respects.

Act No. 3275, approved November 19, 1926, provides for "effective radio control" by the secretary of commerce and communications. In the general appropriation act for 1928 positions for personnel to enforce the regulations under Act No. 3275 were provided for. In May, 1928, the secretary of commerce and communications assigned the personnel to the bureau of posts, under the supervision of the director of posts, as he desired to exercise his powers under Act No. 3275 through the director of posts.

Act No. 3396, approved December 5, 1927, provides for the compulsory installation of radio apparatus on certain vessels of Philippine registry. No funds were, however, appropriated for the effective enforcement of the radio regulations under this law. We, therefore, made temporary arrangements for carrying out the purposes of this act by designating as acting radio inspectors the chief operators of the radio stations at all ports of entry, Aparri, Legaspi, Cebu, Iloilo, Zamboanga, and Davao. Another acting inspector was designated in Manila and the two radio inspectors assigned by the department to enforce the radio regulations under Act No. 3275 were also required to enforce the regulations under Act No. 3396. In the general appropriation act for 1929 positions for radio inspectors are provided for.

Licensing of stations.—Great care was exercised in licensing radio stations both on ships and on land, particular attention being given to the assignment of wave lengths that would not cause unnecessary interference with the working of other stations. When additional radio inspectors are available, every station should be inspected first before renewing the license therefor.

Inspection of ship stations.—From September 1, 1928, when Act No. 3396 went into effect, up to the end of the year, 32 vessels were inspected in Manila and were given the necessary certificates.

Ship stations in operation.—The taking into effect on September 1, 1928, of Act No. 3396, which requires the installation of radio apparatus on certain vessels of Philippine registry, resulted in the increase in number of vessels equipped with radio apparatus. During the year 24 new ship stations were licensed. These, together with the 41 in operation the previous year, brought the total number of ship stations in operation at the close of 1928 to 65, including 5 of the bureau of commerce and industry, 3 of the bureau of coast and geodetic surveys, and 1 of the bureau of customs.

Stations for private use.—At the close of the year, there were in operation 11 radio stations for private use. Three belong to Macleod & Co.; 2 to the Insular Lumber Co.; 3 to Cadwallader-Gibson Lumber Co.; 1 to Panabutan Lumber & Plantation Co.; 1 to Camiguin Lumber Co.; 1 to Visayan Stevedore-Transportation Co. Of the 11 stations, 4 are in Manila; 1 in Cebu; 1 in Iloilo; 1 in Davao; 1 in Fabrica, Occidental Negros; 1 in Limay, Bataan; 2 in isolated places, Camiguin Island, and Sipaco, Camarines Sur, where there are no other means of communication. All these stations work with certain specified stations only and the condition imposed was that they should handle no business other than that of the respective licensees.

In addition to these 11, 3 other privately owned stations were in operation at the close of the year, one at Lumarao, Zamboanga, owned by the Hercules Lumber Co.; 1 at Naga-Naga, Zamboanga, owned by the Mindanao Lumber Co.; one at Panabutan, Zamboanga, owned by the Panabutan Lumber & Plantation Co. These three stations were operated as bureau of posts stations at the entire expense of the companies mentioned.

There were in the process of installation or test by the Manila Railroad Co. a radio station at the Paco Railroad Station, Manila, and another at Naga, Camarines Sur, both of which were to be operated as bureau of posts stations, subject to certain conditions.

Other privately owned radio stations.—The three transoceanic stations of the Radio Corporation of the Philippines, which were licensed in 1927, continued to operate during 1928. In addition, 9 other transoceanic stations of the same corporation were licensed in 1928. The radio corporation also placed in operation 2 feeder stations (at Cebu and Iloilo) for its transoceanic service, thus bringing to 14 the total number of transoceanic stations at the close of the year, all owned by the Radio Corporation of the Philippines.

As in the previous year there were only two broadcasting stations in operation, one belonging to the Radio Corporation of the Philippines, the other to I. Beck (Inc.). The Radio Corporation's station was greatly improved by using increased power and a new wave length, 458 meters.

Examination and licensing of radio operators.—During the year, 223 applicants for radio operator's license were examined, namely, 192 for commercial grade and 31 for amateur grade. Forty-one qualified in the commercial first-grade examination, 38 in the commercial second grade, and 31 in the amateur grade. Seven applicants for amateur operator's license were granted licenses without examination.

Of the 80 commercial-grade operators in 1927, 77 renewed their licenses in 1928. Only 11 of the 29 amateur operators renewed theirs.

At the close of the year there were 198 licensed operators, namely, 118 commercial first grade, 38 commercial second grade, and 42 amateur grade. At the close of the previous year, there were only 80 commercial operators and 29 amateurs.

Franchises for transoceanic radio communication granted to two companies.—During the first session of the eighth Philippine Legislature the Mackay Radio & Telegraph Co., of California, and the Robert Dollar Co. each succeeded in securing a franchise for it "to construct, maintain, and operate in the Philippine Islands, at such places as the said grantee may select, subject to the approval of the Secretary of Commerce and Communications, stations for the transmission and reception of wireless messages for the sending of commercial wireless telegraphic messages from points within the Philippine Islands to points exterior thereto, including airplanes, airships, and vessels, even though such airplanes, airships, or vessels be located within the territorial limits of the Philippine Islands, and the receiving of commercial wireless messages from such exterior points." Each of the two acts specifically provide that it does not authorize the grantee to engage in radiotelephony.

Long-distance telephone franchise.—On November 28, 1928, the Governor General approved Act No. 3426 of the Philippine Legislature, granting to the Philippine Long-Distance Telephone Co. "the right, privilege, and authority to construct, maintain, and operate telephone systems covering the most feasible following routes: Manila-Baguio, including all provinces traversed: Manila-Iloilo-Negros-Cebu, including the provinces and islands traversed."

Private radio stations.—The advent of the less expensive and much more efficient short-wave radio apparatus has brought about a general desire among local firms to establish their own radio stations for handling business between their respective central offices and provincial branches. As early as March, 1928, there were, in addition to the nine short-wave stations of the bureau of

posts, three short-wave stations of the Radio Corporation of the Philippines, three of Macleod & Co., two of Panabutan Lumber & Plantation Co., and three of the Cadwallader-Gibson Lumber Co., besides those of the United States Army and Navy in the Philippines. There were several applications from other private firms for the establishment of short-wave stations for their use. The number of frequencies for efficient short-wave communication being very limited, the government adopted a policy of restricting the installation of private stations as much as possible in order to avoid serious interference not only between the local stations but also with foreign stations. This does not apply, however, to private stations in isolated places, if specifically approved by the government.

Typhoons and communications interruptions.—In the latter part of the month of November the Philippine Islands were visited by one of the most destructive typhoons experienced in recent years. This typhoon, according to the weather bureau, can easily be compared with the "Cantabria typhoon" of September, 1905. It caused tremendous damages to crops and property as well and considerable loss of life, probably over 500, in spite of the fact that the weather bureau was able to send timely warning to the Provinces which were in the track of the typhoon. The steamer *Euzcadi* and several other ships and boats were wrecked near Samar or south of Luzon. The Provinces that suffered most the effects of this typhoon, either by hurricane or very strong winds of extraordinary duration, or by heavy rains and floods, were Samar, northern Leyte, Sorsogon, Albay, Masbate, Capiz, Romblon, Marinduque, the southern part of Tayabas, and Mindoro. The duration of strong winds in this typhoon was rather long, due partly to the fact that, while traversing the Philippines, its rate of progress was only of 10 to 11 miles per hour, and that its direction was changed three times between Samar and the China Sea. According to the weather bureau, the floods in northeastern Luzon, while the typhoon was over the Visayas, were the worst experienced there during the last 15 years, and caused great damage to the crops of the northeastern Provinces of Luzon.

This typhoon caused an enormous damage to the telegraph and cable systems of the bureau of posts, completely destroying many of the telegraph lines in its path, bending radio station masts in certain places, and breaking several submarine cable lines.

The submarine cables between Lucena and Marinduque, that between Romblon and Tablas Island, one of the two between Buluan (Sorsogon) and Ticao Island, the one between Samar and Leyte, and the one between Leyte Island and Cebu Island, were broken. The big 4-conductor cable between Iloilo and Negros, as well as the two cables between Misamis and Kolambugan, were also damaged, the former by the anchor of the steamship *Eclipse*, which took shelter at Pulupandan; the latter by floating logs of the Kolambugan Lumber Co.

The radio masts at Mambajao, Misamis, at Borongan, Samar, at Cathalogan, Samar, and at Sogod, Leyte, were either bent or broken. The antennae of a few other stations were blown down. At Legaspi, Albay, one of the two radio transmitters was damaged when that town was swept with tidal wave, the water being $1\frac{1}{2}$ meters deep.

In many places, telegraph poles and wires were washed away. In other places, especially in Camarines Sur, Albay, Sorsogon, Samar, and Leyte, the telegraph lines were completely destroyed, crushed, or broken to pieces. In other places, especially in Nueva Vizcaya and Tablas Island, parts of the telegraph lines were completely buried on account of landslides and falling trees. The office at Wright, Samar, was completely destroyed, and the post-office safe was lost, a tidal wave having swept the town and covered it with rocks and sand $1\frac{1}{2}$ meters deep. In Sorsogon, the postmaster attempted to go to his office but could not cross the streets on account of flying debris.

Practically all Provinces were cut off from communication with Manila, with the exception of Iloilo, Cebu, Zamboanga, Davao, Sulu, Palawan, Surigao, Agusan, and a few others where the bureau of posts had radio stations. Communication was, however, immediately restored with many points by Monday, November 26, and gradually with the others before November 30, so that by December 3 only the following Provinces were without communication with the outside: Sorsogon, Masbate, Leyte, and Marinduque.

In various Provinces repairs could not be made as promptly as desired on account of flooded streams which the linemen could not cross by any means. The laborers needed could not be had for the reason that the different localities traversed by the typhoon were engaged in repairing their own homes or in other repair work.

Post-office inspectors, supervising linemen, chief operators, and other supervisory officials were authorized to incur such expenditures as might be necessary for the prompt repair of telegraph lines and stations damaged by the typhoon, hiring the necessary number of laborers and needed transportation.

All available inspectors and supervising linemen were sent to the seriously affected Provinces to restore communication. A radio engineer was sent to Legaspi, Albay, with an emergency radio set to reestablish the radio service there. Another radio engineer was sent to Catbalogan, Samar, to repair the radio station at that place. Two supervising linemen were dispatched from Manila and Nueva Ecija toward the Cagayan Valley in addition to the two regular supervising linemen in that region. Special supervisory officials were detailed for duty in the Bicol Provinces, in Marinduque, in Romblon, in Samar, and in Leyte.

The Valley of Cotabato, Mindanao, was hit by a violent earthquake on the 19th of December. Some buildings crashed down, two persons were killed, and about a hundred, more or less, injured. The submarine cable across Lake Lanao and the telegraph line to Cotabato were interrupted by this earthquake, which was followed with numerous aftershocks for several days, the strongest one being on December 28, which was also strongly felt at Zamboanga.

Radio Corporation handling domestic telegrams.—On August 9, 1928, the Governor General announced that he had completed arrangements "for a trial of private operation by the Radio Corporation of the Philippines for a limited period of time in order to demonstrate the efficiency of such private operation in comparison with present government system." The arrangement was made under the provisions of sections 6 and 10 of Act No. 3180. Under the arrangement the Radio Corporation would establish, in addition to its Manila station, stations at Cebu, Iloilo, Cagayan de Misamis, Tacloban, Laoag, Aparri, Davao, and Zamboanga, and as rapidly as thus established the bureau of posts would call upon the Radio Corporation to transmit local messages under the terms of the franchise.

On August 17, 1928, the Radio Corporation's station at Cebu was ready for business, and on October 10, 1928, the one installed at Iloilo was also ready. Up to the end of the year the corporation's stations handled a total of 51,115 domestic telegrams. The corporation's share of the tolls according to the tentative arrangements in force on December 31, 1928, amounted to approximately ₱66,110.17.

BUREAU OF SUPPLY

PURCHASES

The bureau of supply carries in stock in sufficient quantities the most common items of stationery, hardware, and drugs used by the government. These are purchased at least twice a year. The other articles needed by the government and not carried in stock are purchased by the buying division of the bureau as needed. Both methods of purchases are done by public bidding. The total amount of purchases in 1928 was ₱16,110,822.08. In this amount is included the value of supplies bought by the government under the direct order and payment system. This system is an arrangement whereby periodical contracts are entered into by the bureau of supply with local merchants for certain articles which may be requisitioned by, and delivered directly to, the other government offices in the cities of Manila, Cebu, Iloilo, Zamboanga, Legaspi, and Davao.

Distribution of total purchases

	1928	1927
Local merchants:		
Through bureau of supply.....	₱11,596,351.03	₱10,797,114.59
Under the direct order and payment system.....	2,345,119.00	1,319,502.50
The United States.....	2,068,092.12	2,366,813.64
Foreign countries.....	101,259.93	865,244.06
	16,110,822.08	15,348,673.79

The above shows an appreciable increase in the supplies procured by the government under the direct order and payment system. It is the policy of the government to gradually and constantly increase the number of supplies

included in this system, as in this way the bureau is relieved from keeping in stock articles already covered by the system.

STOCK

The purchases made for stock during the year amounted ₱2,432,988.14. This does not mean that the government has at any time this value of supplies on hand. The stocks come in and go out in continuous rotation, so to speak. The value of stock on hand at any time does not reach the million-peso mark. In fact, this value on December 29, 1928, was only ₱710,214.26. The foregoing figures, compared with those of 1927, which were ₱1,748,238.35 and ₱687,277.38, respectively, show that the purchases for stock have actually increased somewhat. This is due to the fact that whereas until recently purchases for stock of the most common needs of the government have been made on an extremely conservative basis, experience has shown that, while a good policy, too much of this conservatism often results in rather uneconomical buying and frequently causes unnecessary delays in the supply of needed materials. And, as the articles which may be needed by the government, but not in stock, have to be purchased, the result is a multiplication of the routine work of the buying division. This condition of things, therefore, counsels a departure from this conservatism and the necessity of gradual increase of purchases of such supplies for stock. Stock supplies are constantly moving in and out and the object aimed at is simply to decrease the work of the buying division in purchases in small quantities.

SALES

The value of the supplies sold to other branches of the government during the year is ₱14,227,716.85. This does not include supplies under the direct order and payment system, as these are paid for directly by the offices concerned. In 1927 the corresponding value of the sales was ₱14,858,870.50. This decrease is partly due to the fact that the Philippine Sugar Centrals Agency stopped its purchases through this bureau on September 1, 1928.

INCOME

The net income of the bureau of supply proper for surcharges collected amounted to ₱361,779.27 and that of the division of cold storage from the sales of ice, water, and storage, to ₱60,668.92, as shown in the following table:

	1928	1927
Bureau of supply:		
Gross earnings derived from operation.....	₱656,611.17	₱627,146.77
Expenses for salaries, wages, supplies and materials and other expenses.....	294,831.90	291,096.72
Net profit on operation.....	361,779.27	336,050.05
Division of cold storage:		
Gross earnings.....	534,827.74	658,761.46
Total expenses.....	474,158.82	422,939.85
Net profit.....	60,668.92	235,821.60

The manufacture of ice in the division of cold storage was unavoidably curtailed during the period when the new machinery was being installed.

The expenses show an increase which is accounted for by payments to the contractors, Edward J. Nell Co., which are chargeable to the appropriation for supplies and materials.

PERSONNEL

There has been no important change in the personnel of the bureau.

BUYING DIVISION

This division issued 85,500 buying orders, prepared 2,511 letter orders, and 611 contracts based on 180 circular proposals during the year.

ACCOUNTING DIVISION

The work done by this division is as follows:

Treasury warrants issued.....	18,768
Sales vouchers prepared.....	27,904
United States orders prepared.....	1,066
Customs entries made.....	141
Payments received.....	₱13,874,116.25
Official receipts issued.....	11,689

DIVISION OF SUPPLIES

The following table shows the volume of work for 1927 and 1928:

	1928	1927
Barrels of cement handled.....	149,254	97,639
Tons of coal issued.....	9,508	11,486
Tons of supplies and materials shipped.....	99,419	64,498
Containers manufactured.....	899,045	89,719

DIVISION OF COLD STORAGE

The installation of the new machinery was completed on June 30, 1928, at a cost of ₱297,055.21.

Payments at an average of ₱7,700 a month, representing the savings in ammonia, electric current, coal, and lubricating oil, are made to cover interest at 6 per cent per annum, and reduction of principal.

PHILIPPINE SUGAR CENTRALS AGENCY

This agency ceased making purchases through the bureau of supply on September 1, 1928.

BUREAU OF COMMERCE AND INDUSTRY

PERSONNEL

On December 31, 1928, there were 251 in the regular, and 778 in the temporary service of the bureau, the corresponding figures for the end of 1927 being 248 and 858. Most of the temporary personnel are employed in the navigation division and in the marine railway and repair shops as skilled and ordinary laborers and sailors.

FINANCIAL STATEMENT

Expenses.—The expenses of the bureau, excluding those of the marine railway and repair shops, amounted to ₱1,155,229.95, distributed as follows, as compared with the expenses of 1927:

Service	Amount		Increase (+) or decrease (-)
	1928	1927	
Administration.....	₱101,210.42	₱80,619.88	+ ₱20,590.54
Trade information.....	155,753.06	156,094.61	-341.55
Steamship.....	693,313.42	626,491.37	+66,822.05
Lighthouse.....	194,933.05	193,713.18	+1,219.87
Total.....	1,145,209.95	1,056,919.04	+88,290.91

INCOME

A comparative statement of income for 1928 and 1927 is given below:

Item	1928	1927	Increase (+), de- crease (-)
Incidental revenue:			
Fines and forfeitures.....	P72.80	P74.24	-P1.44
Mercantile register fees.....	53,843.00	54,466.95	-623.95
Earnings and other credits:			
Service income—			
10 per cent surcharge on supplies sold.....	14.47	374.60	-360.13
Fees for issuance of certified copies of articles of incorporation, etc.....	4,752.65	5,370.76	-618.11
Operation of vessels.....	138,863.06	105,232.89	+33,630.17
Income from rentals.....	110.00	52.00	+58.00
Miscellaneous receipts.....	3,017.98	5,048.86	-2,030.88
Sales of fixed assets.....	3,369.48	5,719.29	-2,349.81
Credit adjustment prior year expense.....	4,770.62	510.67	+4,259.95
Total.....	208,814.06	176,850.26	+31,963.80

Income and expense of the marine railway and repair shops.—There was a net profit of P7,346.80 from the operation of the marine railway and repair shops as shown below:

Statement of the income and expense of the marine railway and repair shops for 1928¹

Income:			
Repair work—			
Service income.....		P369,543.39	
Productive labor.....	P130,906.43		
Supplies and material put in process.....	114,187.72		
		245,094.15	
Gross profit from repair work.....			P124,449.24
Casting—			
Production account.....		7,695.75	
Productive labor.....	5,218.10		
Supplies and material put in process.....	2,472.88		
		7,690.98	
Gross profit from casting.....			4.77
Docking—			
Service income.....		8,549.20	
Productive labor.....	3,713.44		
Supplies and material put in process.....	225.96		
		3,939.40	
Gross profit from docking.....			4,609.80
Gross profit from repair work, casting, and docking.....			129,063.81
Expense:			
Administrative and factory expense—			
Salaries.....		15,130.02	
Wages.....		26,077.37	
Police uniforms.....		266.09	
Traveling expenses.....		41.15	
Postal, telegraph, telephone, and cable service.....		1,100.00	
Miscellaneous service.....		1,162.05	
Supplies and materials.....		12,251.15	
Illumination and power service.....		50,830.44	
Total administrative and factory expense.....			106,858.27
			22,205.54
Other income:			
Sales of fixed assets.....		680.00	
Miscellaneous receipts.....		150.80	
Total other income.....			830.80
			23,036.34
Other expenses:			
Maintenance of plant and equipment.....		7,136.25	
Depreciation of plant and equipment.....		8,553.29	
Total other expense.....			15,689.54
Total net profit.....			7,346.80

¹ The above statement does not include the amount of P50,000 expended during the year 1928 for the repair of Marine Railway No. 1, for which there is provided in the 1928 appropriation act a total special appropriation of (P30,000 and P20,000) P50,000.

GENERAL TRADE INFORMATION SERVICE

There was a total of 1,649 pieces of correspondence received and acted upon from the various Provinces of the archipelago and 739 from foreign countries, mostly from the United States, Japan, Germany, China, the United Kingdom, Hong Kong, and Australia. The inquiries answered covered a wide variety of subjects, such as abaca, automobiles, buttons, coconut products, coffee, coir, corks, dairying, embroideries, firewood, flour, hats, iron, kapok paper, photographs, shells, sugar, tobacco, toys, and wool.

Trade opportunities.—There were 31 business connections sought through the trade opportunity service of the bureau by different firms of the following countries.

	Number		Number
Argentina-----	1	Japan-----	1
Australia-----	1	Netherlands-----	1
Belgium-----	3	Norway-----	2
China-----	1	Philippine Islands-----	1
Dutch East Indies-----	1	United Kingdom-----	2
France-----	3	United States-----	10
Germany-----	2		
Holland-----	1		31
India-----	1		

PUBLICATIONS

The following is a list of publications, articles, and reports prepared by the bureau and sent to interested parties:

- Economic Map of the Philippine Islands.
- Tourist Handbook of the Philippine Islands.
- Commercial Handbook of the Philippine Islands.
- Statistical Bulletin of the Philippine Islands, 1918 (No. 1).
- Statistical Bulletin of the Philippine Islands, 1919 (No. 2).
- Statistical Bulletin of the Philippine Islands, 1920 (No. 3).
- Statistical Bulletin of the Philippine Islands, 1921 (No. 4).
- Statistical Bulletin of the Philippine Islands, 1922 (No. 5).
- Statistical Bulletin of the Philippine Islands, 1923 (No. 6).
- Statistical Bulletin of the Philippine Islands, 1924 (No. 7).
- Statistical Bulletin of the Philippine Islands, 1925 (No. 8).
- Statistical Bulletin of the Philippine Islands, 1926 (No. 9).
- Statistical Bulletin of the Philippine Islands, 1927 (No. 10).
- Directory of Importers and Exporters in the city of Manila.
- Corporation and Partnership Laws of the Philippine Islands, as amended up to December 31, 1924.
- Commerce and Industry Journal.
- Miss Philippines Is Calling You (folder).
- The Philippine Islands (pamphlet).
- Bureau of Commerce and Industry (pamphlet).
- Peanuts as a Money Crop (leaflet).
- Egg Industry of the Philippines (leaflet).
- Big Markets Open for Philippine Kapok (leaflet).
- Paper Manufacturing in the Philippines (leaflet).
- Philippine Cabinet Woods Have a Wide Market (leaflet).
- The Need for a Greater Philippine Rice Production (leaflet).
- Possibilities of the Silk Industry in the Philippine Islands (leaflet).
- The Possibilities of Rubber Industry in the Philippine Islands (leaflet).
- Philippine Rattan Industry Offers Excellent Opportunities (leaflet).
- Possibilities of Dairying and Meat Production in the Philippines (leaflet).
- The Possibilities of the Pineapple Industry in the Philippines (leaflet).
- Great Opportunity in Desiccated Coconut Industry (typewritten).
- List of Lights, Buoys, Beacons, and Day-Marks of the Philippine Islands.
- Adlay as a Grain Crop in the Philippines.
- The Asbestos Industry.
- The Banana Industry.
- Button Manufacturing in the Philippines.
- The Cacao Industry in the Philippines.
- The Fruit Canning Industry in the Philippines.

Cattle Raising Industry in the Philippines.
 The Coffee Industry in the Philippines.
 Dairying and Meat Production in the Philippines.
 Desiccated Coconut in the Philippines.
 The Desiccated Coconut Industry.
 The Egg Industry in the Philippines.
 The Philippine Embroidery Industry.
 Fishing as a Modern Industry.
 The Hat Industry in the Philippines.
 The Kapok Industry in the Philippines.
 The Leather Industry in the Philippines.
 Lumbang Nuts and Oil Industry.
 The Mining Industry in the Philippines.
 The Paper Industry in the Philippines.
 The Peanut Industry in the Philippines.
 The Pearl Fishing Industry in the Philippines.
 The Pili Nut Industry.
 The Pineapple Industry in the Philippines.
 The Pottery Industry in the Philippines.
 The Radio Industry in the Philippines.
 The Rattan Industry in the Philippines.
 The Rubber Industry in the Philippines.
 The Salt Industry and Resources of the Philippine Islands.
 The Silk Industry in the Philippines.
 The Starch-Making Industry in the Philippines.
 The Philippine Sugar Industry.
 Textile Manufacturing in the Philippines.

MARKET REPORTS

Market reports were distributed in 1928 and 1927 as follows:

Reports	Number	
	1928	1927
English Manila Daily Market Report:		
Distributed in the Philippines.....	43, 731	34, 423
Sent to the United States.....	4, 568	4, 228
Sent to foreign countries.....	336	302
	48, 635	38, 958
Spanish Manila Daily Market Report.....	22, 848	23, 556
English Weekly Market Report:		
Distributed in the Philippines.....	59, 932	57, 240
Sent to the United States.....	6, 168	5, 459
Sent to foreign countries.....	1, 568	1, 590
	67, 668	64, 281
Spanish Manila Weekly Market Report.....	8, 412	8, 109
English Manila Monthly Market Report.....	796	2, 650
Spanish Manila Monthly Market Report.....	372	1, 696
Spanish copies of Manila Tuesday Market Report.....	52	52
English fortnightly compilation of New York and Philippine Island sugar prices.....	104	104

BROKERS

The following brokers were licensed in 1928 under Act No. 2728, section 3 (e):

Merchandise brokers.....	94
Ship brokers.....	80
Exchange brokers.....	22
Stockbrokers.....	3

Total 199

TOURIST SERVICE

The bureau rendered service to tourists by furnishing them guides and information. The following statements will show the kind and extent of this service:

Statement showing the activities of the tourist guides during the year 1928 as compared with those of 1927

Item	1928	1927	In-crease	De-crease
Total number of persons handled, including those brought in by the round-the-world cruises	2, 296	2, 280	16	
Total number of persons traveling independently	480	295	185	
Total number of persons given information but were not accompanied by any guide	186	438		252
Total number of vessels boarded	131	152		21

Comparative statement of the total number of passengers aboard the round-the-world cruises that visited the Philippine Islands 1928 and 1927

Name of steamers and operators	1928	1927	In-crease	De-crease
S. S. Belgenland (American Express Co.)	331	400		69
S. S. Empress of Scotland (Canadian Pacific)		425		425
S. S. Empress of Australia (Canadian Pacific)	331		331	
S. S. California (Frank C. Clarks)		600		600
S. S. Caledonia (Frank C. Clarks)	449		449	
S. S. Franconia (Thomas Cook & Sons)	325		325	
S. S. Resolute (United American Line)		450		450
S. S. Resolute (Hamburg America Line)	380		380	
S. S. Op Ten Noort (Meerkamp & Co.)		120		120
Total	1, 816	1, 995	1, 485	1, 664

Number of persons who visited places of interest indicated below accompanied by tourist guides in 1928

Antipolo, Rizal	51
Baguio, Mountain Province	19
Canlubang sugar estate, Laguna	2
Fort William McKinley, Rizal	231
Las Piñas bamboo organ, Rizal	192
Los Baños, Laguna	10
Manila and suburbs	480
Marikina, Rizal	3
Marilao, Bulacan	4
Montalban Gorge, Rizal	72
Pagsanjan Falls and Rapids, Laguna	93
Ruins of Guadalupe, Rizal	170
Sibul Springs, Bulacan	2
Taal Volcano, Batangas	1
Total number of persons	1, 330

REGISTRATION OF MERCANTILE DOCUMENTS

Mercantile documents are registered by the bureau in the division of mercantile register corporations, trade-marks, and patents. The services performed are tabulated below:

Statement showing the transactions of the corporations section and the amount of collections made by the same in 1928

Nature of work performed	Number	Fees collected
Licenses issued to foreign corporations to transact business in the Philippines.....	18	P4, 350. 00
Articles of incorporation of stock corporations examined and filed.....	213	13, 200. 00
Articles of incorporation of nonstock corporations, including beneficent societies, clubs, schools, and religious organizations, examined and filed.....	49	1, 225. 00
Certificates of increase of capital stock of various corporations examined and filed.....	23	2, 725. 00
Amended articles of incorporation of various corporations examined and filed.....	23	230. 00
By-laws of various corporations examined and filed.....	206	412. 00
Amendments to by-laws of various corporations examined and filed.....	46	92. 00
Substitute appointments of chief priests of religious corporations examined and filed.....	2	20. 00
Cancellation of deeds of trust.....	1	25. 00
Substitute appointments of agents of foreign corporations examined and filed.....	25	250. 00
Powers of attorneys, deeds of sale, and other documents in connection with corporations registered in this office examined and filed.....	22	66. 00
Affirmative certificates regarding the registration of corporations issued.....	3	15. 00
Certified copies of corporation papers and certification issued.....	405	3, 264. 50
Articles of incorporation of cooperative marketing associations examined and filed.....	2	30. 00
Articles of incorporation of puericulture centers examined and filed.....	13	Exempt.
Articles of incorporation of rural credit associations and by-laws examined and filed.....	3	Do.
Total amount collected during 1928.....		25, 904. 50
Total amount collected during 1927.....		25, 824. 00
Increase of 1928 collections over 1927.....		80. 50

Statement showing the transactions of the partnerships' section and the amount of collections made by the same in 1928

Nature of work performed	Number	Fees collected
Articles of copartnership examined and registered.....	131	P4, 660. 00
Powers of attorney, bills of sale, modifications of articles of copartnership, etc., examined and registered.....	148	814. 00
Documents showing increase in capital of partnerships examined and registered.....	2	21. 00
Private merchants examined and registered.....	4	42. 00
Negative certificate.....	1	2. 00
Certified copies of partnership papers and certifications issued.....	122	517. 50
Total amount collected during 1928.....		6, 056. 50
Total amount collected during 1927.....		6, 650. 50
Decrease of 1928 collections from 1927.....		594. 00

Statement showing the transactions of the trade-marks' section and the amount of collections made by the same in 1928

Nature of work performed	Number	Fees collected
Trade-marks examined and registered.....	501	P23, 550. 00
Assignments of trade-marks examined and registered.....	118	1, 620. 00
Certified copies of United States letters patent examined and registered.....	330	660. 00
Assignments of United States letters patent examined and recorded.....	30	60. 00
Labels of trade-marks examined.....	14	70. 00
Certified copies of trade-mark registrations issued.....	41	662. 50
Documents not required by law to be registered.....	4	12. 00
Total amount collected during 1928.....		26, 634. 50
Total amount collected during 1927.....		27, 362. 50
Decrease of 1928 collections from 1927.....		728. 00

STEAMSHIP AND LIGHTHOUSE SERVICE

Shipping section.—The following vessels were in operation during the year: Cutter *Apo*, Steamship *J. Bustamante*, cutter *Corregidor*, cutter *Polillo*, launch *Jolo*, launch *Ethel*, and one wooden scow.

The cutter *Basilan* remained out of commission during the whole year. The cutter *Apo* was dry-docked and repaired at Engineer Island from March 7 to May 12. While undergoing repairs she was towed to the Cavite Navy Yard for general inspection, staying there from April 4 to April 9. After making

one trip from May 19 to June 1, she again underwent minor repairs from June 7 to 30. On September 3 she was sent to Olongapo for dry-docking on the Navy floating dock, and from there she was sent to the Cavite Navy Yard, where the naval authorities made stability experiment, returning to Manila on September 7. Another stability experiment was made on the cutter *Apo* at the Cavite Navy Yard on September 18 and 19. As a result of the inspections and experiments the naval authorities have declared the cutter *Apo* a "fair weather" boat only and recommended that a ballast of at least 25 tons of pig iron be placed on board. The cutter *Polillo* also underwent a long period of repairs at Engineer Island from January 1 to April 23, having been on the dry-dock from February 1 to 29. Also the cutter *Corregidor* was under repairs at Engineer Island from June 1 to September 23, during which she was on the dry dock from June 4 to August 1. Due to lack of funds the steamship *J. Bustamante* was not dry-docked during the year. Other minor repairs have been done on each vessel at Engineer Island.

During 1928 the vessels operated by the bureau (excluding launches and scow) made 50 trips in all; of which 6 were for cable work, 15 for lighthouse inspection and construction, 1 for combined cable and lighthouse work, 4 for leper collection, 8 for the Governor General, 2 for the president of the senate, 4 for other governmental purposes, 1 for the assistance of vessels in distress, and 9 for combined lighthouse and semicommercial trips. They have traveled 72,527 nautical miles and touched at 977 places; transported 3,985 passengers, of which 436 traveled under courtesy transportation, and 1,930 tons of general cargo; and consumed 7,312 tons of coal. The following comparative statement shows the number of trips made, ports touched, miles traveled, and days spent on the trips made by these vessels for the years 1926 to 1928:

	1926	1927	1928
Number of trips made.....	44	40	50
Number of ports touched.....	893	878	977
Number of miles traveled.....	66,825	72,871	72,527
Number of days spent on trips.....	628	591	678

LIGHTHOUSE SECTION

The following table shows the number and class of aids to navigation maintained during 1928 as compared with 1927:

Class	1927	1928	Increase (+) or decrease (-)
Lights:			
First order flashing.....	3	3	-----
Second order flashing.....	1	1	-----
Third order flashing.....	9	10	+1
Fourth order flashing.....	9	9	-----
Sixth order flashing.....	10	11	+1
Sixth order occulting.....	21	21	-----
Large-lens lantern.....	18	18	-----
Small-lens lantern.....	78	78	-----
Acetylene gas flashing.....	48	46	-2
Electric globe lights.....	2	2	-----
Total.....	199	199	-----
Buoys:			
Gas-lighted buoys.....	5	4	-1
First-class can buoys.....	4	4	-----
Second-class can buoys.....	42	42	-----
Third-class can buoys.....	27	26	-1
First-class nun buoys.....	4	4	-----
Second-class nun buoys.....	43	43	-----
Third-class nun buoys.....	22	21	-1
Third-class spar buoys.....	2	0	-2
Total.....	149	144	-5
Beacons.....	80	77	-3
Total.....	428	420	-8

Of the 199 lights in operation during 1928, 146 are watched and 53 are unwatched. One hundred and forty of these lights use kerosene oil, 11 are operated by electricity, 46 are of the automatic type, and 2 are electric globes.

New aids established.—During the year the following aids to navigation were established:

1. At Bongabon, Mindoro, one fixed red light, small-lens lantern, displayed from a standard concrete tower, was established on May 24, 1928.

2. At Jimenez, Mindanao, one fixed red light, small-lens lantern, displayed from a standard concrete tower, was established on May 19, 1928.

3. At Loay, Bohol, one fixed red light, small-lens lantern, displayed from a standard concrete tower, was established on August 2, 1928.

Improvements to navigational aids.—During the year improvements were made on the following lighthouses:

Tubataha Light Station.—The unwatched automatic acetylene flashing white light has been changed to an attended third-order flashing white light exhibited from a 120-foot tower of cylindrical form with light keeper's dwelling.

Saluag Light Station. The unwatched automatic acetylene flashing white light has been changed to an attended sixth-order flashing white and red light, exhibited from a 90-foot tower of cylindrical form with light keeper's dwelling.

Engineering and construction.—The following are the most important projects completed during the year:

One standard concrete tower for a fixed red light for Odiongan, Romblon.

One standard concrete tower for a fixed red light for Estancia, Iloilo.

One standard concrete tower for a fixed red light for Ormoc, Leyte, to replace the dilapidated one.

One concrete beacon for Agusan River, Mindanao, to replace the dilapidated one.

MARINE RAILWAY AND REPAIR SHOPS

Activities.—The total number of work orders issued in the marine railway and repair shops during the year just ended was 834, as compared with 883 during the preceding year, or a decrease of 49 work orders. A comparative statement of work orders for the last two years is shown in the following table:

Nature of work	1928	1927	Increase	Decrease
Repairs and overhauling of Coast Guard cutters and motor ships	82	44	38	-----
Repairs and overhauling of steam and motor launches and motor boats	55	65	-----	10
Repairs on dredges	13	20	-----	7
Repairs on scows	1	1	-----	-----
Docking with lay days	16	36	-----	20
Construction, repairs, and maintenance of lighthouses and light-house apparatus	140	116	24	-----
Repairs and overhauling of automobiles and parts and motor cycles and parts	45	38	7	-----
Repairs and overhauling of typewriters, adding and numbering machines, and parts	198	228	-----	30
Miscellaneous repairs	284	335	-----	51
Total	834	883	69	118

The following statement shows the number of vessels docked during the year 1928:

Class of vessels and number of docking orders

Cutters, motor ships, and motor schooners	4
Steam and motor launches and motor boats	9
Scows and lorchas	2
Dredges and steamship <i>Dredger</i>	1
Total	16

Medical inspection.—The following statement shows the work performed by the dispensary at Engineer Island during 1928, as compared with 1927:

	1928	1927	Increase	Decrease
Consultations with medicine supply	664	701	-----	37
Dressings	2, 468	2, 526	-----	58
Accidents	298	143	155	-----
Operations	47	49	-----	2
Physical examinations	258	337	-----	79
Simple-remedy packages	35	20	15	-----
Medicine chests refilled	16	5	11	-----
Disinfections	8	9	-----	1
Sent to hospital	2	2	-----	-----
Vaccinations against cholera, typhoid and paratyphoid	-----	15	-----	15
Medical certificates issued	-----	3	-----	3
Total	3, 796	3, 810	181	195

BUREAU OF LABOR

Organization and personnel.—The bureau of labor consists of six divisions with 118 officers and employees.

Since Act No. 3428, otherwise known as workmen's compensation law, took effect on June 11, 1928, the volume of correspondence received increased considerably. An average of about 60 letters was received daily. During the year 456 publications were likewise received from different branches of the government and private institutions in the islands and 493 from labor offices and other institutions in the United States and foreign countries, or a total of 949 publications.

LABOR INSPECTION

During the year 1928, 60 municipalities of 10 Provinces, including the city of Manila, were inspected.

The following table shows the comparative statement of the regular inspection by the bureau of labor during the last five years:

Year	Total		Industrial establishment		Mercantile establishment		Plantations or haciendas	
	Centers of labor	Work people employed	Number	Work people employed	Number	Work people employed	Number	Work people employed
1924	2, 048	73, 121	1, 765	65, 042	171	2, 671	112	5, 408
1925	2, 821	69, 881	2, 445	60, 418	329	6, 067	47	3, 396
1926	3, 245	93, 977	2, 573	69, 948	378	4, 243	294	19, 786
1927	4, 584	78, 701	3, 718	59, 608	655	7, 783	211	11, 310
1928	5, 106	94, 446	4, 008	76, 611	992	10, 941	106	6, 891

The regular inspection may further be classified as follows:

Classification	Estab- lishments	Number of laborers
Factories and industries	2, 894	62, 880
Mercantile and commercial	992	10, 941
Agricultural and pastoral	106	6, 894
Machineries	115	1, 335
Re women and children	564	12, 396
Compliance visit and reinspection	435	-----
Total	5, 106	94, 446

¹ Includes 1,419 children.

Inspection of machinery.—During the year under review a total of 115 establishments with machinery installed and employing 1,335 laborers were inspected with a view to preventing accidents as against 210 establishments in 1927, or a decrease of 95. The machinery in those establishments consisted of 9 steam boilers, 5 steam engines, 59 electric motors, 4 crude-oil engines, 4 acetylene tanks, 4 oxygen tanks, and 2 carbide generators; 113 pieces of machinery were found in satisfactory condition while 2 required improvement as to protective appliances. Necessary steps were taken to remedy existing defects. Five special investigations with respect to conditions of machinery were conducted by the mechanical inspector during the year in Manila and in the Provinces.

WOMAN AND CHILD LABOR

For the proper enforcement of the provisions of Act No. 3071, inspections of centers of labor were made, home and office investigations of minors were conducted and the managers were reached by the office through its labor deputies or by correspondence.

The inspection work in Manila covered 542 centers of labor where 9,604 women and 1,252 children are employed, or a total of 10,856 workers, as against 445 centers of labor employing 9,320 women and children in 1927, or an increase of 97 establishments and 1,536 employees. In Pasay and Malabon 18 establishments with 973 women and children were inspected as against 23 establishments with 1,062 workers of last year, or a decrease of 5 establishments and 89 workers. This decrease may be explained by the fact that five big cigar factories had been closed.

The following table shows the number of establishments inspected during the year 1928, in accordance with Act No. 3071, together with the number of women and minors employed, by industries:

Name of establishment	Number of establishments	Total number of women	Number of minors below the age of 18 years			
			Total	Male	Female	General total
Aerated water.....	7	34				34
Asbest sheet.....	1	10	3		3	13
Bags repairing.....	10	107	17	1	16	124
Button factory.....	1	100	17	9	8	117
Candle factory.....	1	3				3
Candy factory.....	9	86	19	2	17	105
Cigar and cigarette.....	40	5,552	927	102	825	6,479
Desiccated coconut.....	1	202				202
Dressmakers.....	66	372	32	2	30	404
Embroideries.....	23	1,787	107	1	106	1,894
Glass factory.....	1	2				2
Hats factory.....	6	39	7	3	4	46
Ice-cream plant.....	1	2	6		6	8
Laundries.....	3	271				271
Match factory.....	1	53	8	4	4	61
Printing press.....	24	84	46	32	14	130
Refreshments.....	318	132				132
Reiter and Weldermann.....	1	49				49
Retazo importers.....	2	15				15
Shirt factories.....	16	435	36	2	34	471
Shoes factory.....	3	145				145
Spinning hemp.....	4	77	16		16	93
Umbrella factories.....	3	47	11	2	9	58
Total.....	542	9,604	1,252	160	1,092	10,856
Malabon.....	15	750	167	42	125	917
Pasay.....	3	56				56

Records of inspections of minors show the wages which they receive. The greatest number of minors earn ₱3 a week. While the highest pay is ₱7 a week the lowest is ₱0.50 weekly. The latter, however, is received only by apprentices. Skilled work is highly paid. Stripping tobacco, cutting cigars and cigarettes, wrapping candies, and other occupations which pertain to children are paid low wages. The following illustrates in detail the different wages which minors receive:

Weekly wages:		Minors
Under ₱0.50	-----	5
Under ₱1.00	-----	15
Under ₱1.50	-----	38
Under ₱2.00	-----	89
Under ₱2.50	-----	36
Under ₱3.00	-----	257
Under ₱3.50	-----	140
Under ₱4.00	-----	135
Under ₱4.50	-----	46
Under ₱5.00	-----	194
Under ₱5.50	-----	14
Under ₱6.00	-----	54
Under ₱6.50	-----	11
Under ₱7.00	-----	63
Total	-----	1,097

Regular inspections were made of cigar and cigarette factories, embroidery centers, shoe factories, ice-cream establishments, printing concerns, desiccated coconut industries, shirt and underwear factories, candy firms, hat factories, button factories, and match factories. In these establishments, women and child labor is popular in view of the nature of the work and the low wages offered to laborers. A special inspection was made of two desiccated coconut industries and one aerated water factory in Laguna and one desiccated coconut industry in Tayabas.

More than anything else, good working conditions were stressed upon and proper ventilation, good drinking water, suitable closets and lavatories proper for women and children were emphasized. It was interesting to note that even small establishments which can not provide for dressing rooms have a private place where the female laborers can change their dress. Women who work near parts of machines were required to use short-sleeved camisas and caps and have their hair properly done in order to prevent these from being caught by the moving machines. The managers showed themselves willing to follow recommendations as to the betterment of working conditions, but sometimes laborers do not avail themselves of working conveniences provided for by the employer.

A total of 726 minors were investigated this year as against 587 in 1927 or an increase of 139 minors or 23 per cent in favor of 1928. These investigations were made for the purpose of ascertaining whether or not a minor found illegally employed should be suspended or given temporary work permit. Noncompliance with the educational, age, and birth certificate requirements of Act No. 3071 were mostly the grounds for investigations.

CLAIMS AND COMPLAINTS

The following table shows the settlement of claims and complaints filed with the bureau of labor during the last five years:

Year	Claims and complaints	Claimants	Adjustment		Amount collected
			Favorable	Unfavorable	
1924	688	1,155	431	257	₱30,339.09
1925	615	1,371	365	250	19,209.63
1926	766	1,697	447	319	23,575.26
1927	728	1,418	493	235	18,171.91
1928	923	2,146	511	412	22,912.21
Total	3,720	7,787	2,247	1,473	114,208.10

The function of the bureau of labor, in connection with the settlement of claims and complaints involving the payment of compensation for services rendered, money advanced by employers to laborers, claims for one month's pay in case of dismissal without just and reasonable cause and a previous

30 days' notice as provided for by article 302 of the Code of Commerce, for the recovery of personal effects and apparel, and petitions for reemployment, all arising out of the relations between employers and employees, masters and servants, constitutes one of the most important activities of the bureau. Laborers and employees find a helping hand in the bureau for the settlement of their claims against employers and masters, which would entail them considerable expense were such claims brought to the courts of justice with the assistance of lawyers.

The service of this bureau is availed of not only by Filipino laborers but also by American employees and other nationalities.

STATISTICAL SUMMARY OF ACCIDENT CASES UNDER THE WORKMEN'S COMPENSATION ACT NO. 3428

1. Accident cases

(a) Number	920
(b) Total amount of compensation paid	P22, 216. 52
(c) Total amount of medical expenses	8, 941. 55
(d) Total amount of hospital expenses	9, 005. 77
(e) Total amount of funeral expenses	2, 127. 09

Aggregating 42, 290. 93

The majority of the sugar centrals and big sugar plantations, and a few industrial establishments such as lumber mills, mines, cement, and railway transportations maintain their own medical staff and hospitals or dispensaries for the care of their employees and laborers and do not report to the bureau the cost of the hospital and medical services for each individual case of minor accident; for this reason the figures quoted above do not include these items of expenses, to wit: The medical, surgical, and hospital supplies afforded to the employees by the said enterprises. The actual amount expended for these items is therefore greatly in excess of the foregoing figures.

2. Nationalities of victims

	Accident cases
Filipinos	906
Chinese	7
Japanese	5
Americans	1
Germans	1

3. Sex and civil status

These accidents include:

Males	919
Females	1
Married	566
Single	354

4. Classification of accidents

(a) Total number of deaths	68
(b) Total number of permanent total disability cases	--
(c) Total number of permanent partial disability cases	18
(d) Temporary disabilities:	
1. One week and under	452
2. One to two weeks	123
3. Over two weeks	259

5. Compensation benefits classified

(a) For fatalities:	
1. Compensation paid	P7, 593. 50
2. Medical expenses	498. 95
3. Hospital expenses	502. 70
4. Funeral expenses	2, 127. 09

Classification by cases of the dependents resulting from these fatal accidents:

	Cases ¹
1. 34 widows and 57 children left dependent.....	34
2. Mothers and fathers left dependent.....	13
3. Brothers and sisters left dependent.....	9
4. No dependents reported.....	12
(b) For permanent disabilities:	
1. Compensation paid.....	
2. Medical expenses.....	
3. Hospital expenses.....	
(c) For permanent partial disabilities:	
1. Compensation paid.....	\$4, 299. 18
2. Medical expenses.....	872. 60
3. Hospital expenses.....	548. 12
(d) For temporary disabilities:	
1. Compensation paid.....	10, 323. 84
2. Medical expenses.....	7, 570. 00
3. Hospital expenses.....	7, 954. 95

6. Weighted number of working days time lost¹

(a) Fatales.....	408, 000
(b) Permanent total disabilities.....	
(c) Permanent partial disabilities.....	15, 300
(d) Temporary disabilities.....	10, 392
Total days lost.....	433, 692

7. Ratio of death cases

(a) Number of accident cases.....	920
(b) Number of deaths.....	68
(c) Number of deaths per 100 accident cases.....	8

8. Ratio of machine injuries

	Number	Percentage
(a) All machine injuries.....	81	9
(b) All other injuries.....	839	91
(c) Total injuries.....	920	100

9. Accident cases by industries

Industries	Number of cases	Percentage
1. Land and water transportation, wharfs, etc.....	363	39.47
2. Oils, fats, etc.....	78	8.38
3. Metal works, etc.....	34	3.71
4. Mining, quarrying, and other stone works.....	8	.88
5. Food, drinks, tobacco, etc., manufacturing and distribution.....	114	12.40
6. Textiles, clothing, hat, shoes and leather goods.....	5	.55
7. Building and engineering constructions.....	9	.99
8. Books, printing, publishing, etc.....	6	.66
9. Wood, furniture, sawmill, and lumber yards.....	146	15.88
10. Miscellaneous and general labor.....	90	9.79
11. Government activities.....	67	7.29
Total.....	920	100

Ten accident cases were awarded lump sum settlements.

¹ The schedule formulated by the committee on statistics and compensation cost of the International Association of Industrial Accident Boards and Commissions has been adopted.

10. Accident cases by causes

Cause	Fatals	Permanent total disability	Permanent partial disability	Temporary disability	Total
1. Machinery.....	13		10	58	81
2. Vehicles (not including construction of).....	2			122	124
3. Explosions, electricity, fires, and hot substances.....	2			6	8
4. Poisonous and corrosive substances and occupational diseases.....				1	1
5. Falls of persons.....	7		1	89	97
6. Stepping on or striking against objects.....	1			60	61
7. Falling objects (not being handled by injured).....	29		3	113	145
8. Handling of objects.....	14		2	258	274
9. Hand tools.....			2	96	98
10. Animals.....				2	2
11. Miscellaneous.....				29	29
Grand total.....	68		18	834	920

11. Accident cases, by ages

Under 16 years.....	0
Under 20 years.....	124
Under 30 years.....	534
Under 40 years.....	186
Under 50 years.....	48
60 years or over.....	28

INDUSTRIAL ACCIDENTS

The following table shows the number of accidents settled through the intervention of the bureau of labor, the victims being classified according to degree of injury, number of victims indemnified and unindemnified, and the total amount collected as grants, donations, gratuities, or indemnities received from employers:

Year	Number of accidents	Victims			Total	Adjustments		
		Degree of injury				Indemnified	Unindemnified	Amount collected
		Temporarily	Perpetually	Fatal				
1924-----	500	437	31	61	529	214	315	P11,404.81
1925-----	430	390	15	48	453	247	206	21,706.03
1926-----	447	390	19	104	513	375	138	25,053.48
1927-----	452	355	34	143	532	322	210	135,394.81
1928-----	1,104	968	27	109	896	800	96	48,954.26
Total-----	2,933	2,540	126	465	2,923	1,958	965	142,513.39

¹ The 109 accidents with 148 victims pending in 1927 were settled in 1928 with the amount of P7,383.92 having been added to that collected in 1927 as indemnities as shown in the foregoing table.

During the year under review a total of 1,104 cases of accidents were registered as against 452 of last year, or an increase of 652 cases or 59 per cent. A total of 920 cases of accidents were recorded since the taking into effect of the workmen's compensation law. The great difference in number of accidents noted does not mean an increase in the occurrence of accidents. The report of cases of accidents is obligatory and penalized under the new law, whereas under the employers' liability act, such report was frequently disregarded.

STRIKES AND OTHER INDUSTRIAL DISPUTES

The following table shows the adjustment of strikes and other industrial disputes through the intervention of the bureau of labor during the year 1928:

Year	Strikes and other industrial disputes			Number of work people involved	Causes of conflicts		Adjustment in favor of	
	Total	Union-ists	Non-unionists		Wages	Other causes	Work-people	Employer
1924.....	20	15	5	6,784	13	7	12	8
1925.....	23	18	5	9,936	12	11	19	4
1926.....	27	24	3	7,279	18	9	16	11
1927.....	53	40	13	8,567	33	20	39	14
1928.....	38	27	11	4,729	21	17	21	17
Total.....	161	124	37	37,295	97	64	107	54

Stoppage or suspension of work had already taken place in 31 disputes before the intervention of the bureau of labor could be put into effect.

As a result of the 31 disputes, which involved stoppage or suspension of work, the laborers sustained a total loss of approximately 43,534 working days or ₱76,226 in wages. No estimate has been made of the amount of loss sustained by employers.

Twenty-three strikes and other industrial disputes took place in the city of Manila while the 15 others occurred in the Provinces, namely, Bataan, Bulacan, Bohol, Cebu, Davao, Iloilo, Laguna, Masbate, Sorsogon, and Rizal.

FREE EMPLOYMENT AGENCIES OF THE BUREAU OF LABOR

Number of workers of different occupations registered and placed by the bureau of labor during the last five years, as follows:

Year	Registration	Placement	Percentage
1924.....	4,673	4,246	90.9
1925.....	5,106	4,469	87.5
1926.....	3,879	3,208	82.7
1927.....	2,549	2,064	80.9
1928.....	2,686	2,260	83.8
Total.....	18,893	16,247	85

The bureau has five free employment agencies with adequate personnel in Manila, Cebu, Iloilo, Albay, and Occidental Negros. In other Provinces there are labor deputies stationed who act as representatives of this office.

EMBARKATION AND EXECUTION OF CONTRACTS OF SEAMEN

The following table shows the number of contracts executed and the embarkation of seamen during the last five years:

Year	Contracts		Embarkation (seamen)		Total
	Number	Collection	New	Renewal	
1924.....	659	₱227.55	90	23,547	23,637
1925.....	606	192.60	12	21,576	21,588
1926.....	635	226.95	34	24,465	24,499
1927.....	547	192.60	27	22,289	22,316
1928.....	609	182.40	20	25,672	25,692

During the year under review the execution of 609 contracts involving 25,692 seamen with the intervention of the bureau was registered as against 22,316 for the year 1927, or an increase of 3,376. The amount of ₱182.40 was realized from the sale of shipping articles in the execution of the contracts.

Care should be taken in using these figures for statistical purposes, because they merely represent the actual number of embarkations made as per contracts

formalized, regardless of the number of times the individual seamen might have embarked during the year. The contracts were frequently renewed due to the desire of shipowners to get rid of undesirable men without much inconvenience. The average duration of contracts ranges from one round trip to three months at the request of the shipowners and as a result the number of seamen actually embarked is very great. During the year under consideration, 341 seamen's certificates were issued to 341 individuals for ₱170.50.

INTERISLAND MIGRATION

The following table shows the number of emigrant homeseekers recruited and shipped by the bureau of labor to scarcely populated regions during the last five years:

Year	Total	Emigrant homeseekers	Members of families	Expenses incurred
1924.....	934	193	741	₱14,200.00
1925.....	962	213	749	15,302.35
1926.....	1,561	337	1,224	27,010.50
1927.....	1,556	312	1,244	28,315.50
1928.....	1,808	280	1,528	41,166.00
Total.....	6,821	1,335	5,486	125,994.35

During the year under review 1,808 homeseekers, including members of families, were recruited and shipped by the bureau of labor to Mindanao and Mindoro, or an increase of 352 individuals over that of the previous year. Of the ₱60,000 appropriated for transportation, subsistence, and quarters of emigrant homeseekers, ₱41,166 were expended, or a per capita cost of ₱23.77.

The following table indicates the destinations of homeseekers and the expenses incurred for their transportation, subsistence, and quarters during the year 1928:

Destination	Total members	Number of families	Cost of transportation, etc.
Cotabato.....	1,131	177	₱26,540.70
Zamboanga.....	85	13	2,380.00
Davao.....	355	50	8,982.60
Bukidnon.....	23	2	310.00
Lanao.....	17	4	460.00
Agusan.....	36	6	786.00
Total.....	1,647	252	₱39,459.30
Mindoro.....	161	28	1,706.70
Grand total.....	1,808	280	₱41,166.00

FILIPINO LABORERS EMIGRATING TO AND RETURNING FROM THE TERRITORY OF HAWAII

The following tables show the number of Filipino emigrants to and returning from the Territory of Hawaii during the last five years:

EMIGRANTS TO HAWAII

Year	Total	Number		
		Males	Females	Minors
1924.....	9,869	8,171	1,116	582
1925.....	6,519	6,104	256	159
1926.....	3,356	2,977	160	219
1927.....	10,074	9,784	120	170
1928.....	9,322	9,026	153	143
Total.....	39,140	36,062	1,805	1,273

EMIGRANTS RETURNING TO THE PHILIPPINES

Year	Total	Number		
		Males	Females	Minors
1924.....	2,195	1,730	204	261
1925.....	2,754	2,183	264	307
1926.....	3,390	2,562	348	480
1927.....	3,565	2,410	510	645
1928.....	4,839	3,968	379	492
Total.....	16,743	12,853	1,705	2,185

As in the case of previous years the Provinces from which a great number of emigrants came are as follows: Ilocos Norte, 2,833; Ilocos Sur, 2,045; Pangasinan, 2,226; La Union, 872; Abra, 271; Tarlac, 519; or a total of 8,766, or 94 per cent of the total number of emigrants to Hawaii for the year. It is clearly seen that practically all of the emigrants were Ilocanos.

Reports relative to the activities of private recruiting agents were received. These agents were recruiting, enlisting, and shipping laborers to Hawaii without the necessary license required by Act No. 2486. These activities of the unlicensed recruiters not only deprived the government of the revenues due to it, but they also subjected the unwary country folk to unjust exactions through misrepresentations, besides exposing them to unnecessary risk and hardship upon their arrival in Honolulu. Cases arising out of the anomalous relations between these private recruiting agents or brokers and laborers have been brought to the courts of justice, but the former were always acquitted.

FILIPINO LABORERS IN THE UNITED STATES

According to reliable reports, the Filipino laborers in the United States are actually facing serious difficulties. At present there are in that country about 100,000 Filipinos. In the State of California alone there are around 25,000. Of these 100,000 only a few are studying in schools and universities. Many are engaged in agricultural work, in working as domestics of private families, as servants or waiters in hotels and restaurants, as laborers in industrial and commercial establishments and in the salmon canneries of Alaska.

UNEMPLOYMENT

New industries of large-scale production, such as desiccated coconut plants, have absorbed hundreds of laborers. The erection of new sugar centrals and the consequent increase in acreage dedicated to the production of sugar augmented the number of people engaged in gainful occupations. The emigrants to Hawaii, numbering 10,000, relieved unemployment in northern Luzon, but this number constitutes a substantial reduction in our productive force. A considerable number of homeseekers were sent to Mindanao and Mindoro, not to mention the natural current of emigration so noticeable chiefly from Batangas and Pampanga to Mindoro; from Tayabas and Marinduque to the Bicol Provinces; and from Cebu and Bohol to Mindanao.

The construction of buildings in Manila considerably reduced unemployment in the city. In fact, the demands for more hands, particularly carpenters, exceeded the supply, so that laborers of this trade from Pampanga and Rizal found employment in Manila. Another redeeming feature of the unemployment problem in Manila, especially for members of seamen's unions, was the increase in the number of boats for the interisland trade. In addition, the agencies of the bureau of labor have been able to place more than 2,000 persons in different occupations.

The returns from officials of 40 labor unions, with a total membership of 32,000, show that 8,000, or 25 per cent, were unemployed. No returns have been received from other labor organizations. As usual, the seamen's union registered the highest percentage of unemployment, although the volume as stated above was lessened by the addition of new ships to the interisland trade.

As a whole, it can be stated that for the present the unemployment situation no longer constitutes a serious problem.

COST OF LIVING

The cost of living of laborers remained practically the same during the year under review, compared with that of 1927. This is mainly due to the fact that the price of rice during 1928 registered no change. No change was likewise noted on the other items that enter into the cost of living of a laborer's family, namely, clothing, housing, fuel and light, and sundry. The estimated daily cost of living of common and skilled laborers employed in industries in some towns of the islands is as follows:

City or town	Skilled		Common	
	Single	Married	Single	Married
Manila.....	P1.42	P2.54	P1.10	P1.93
Cebu.....	1.17	2.22	.83	1.77
Iloilo.....	1.08	2.44	.94	1.84
Legaspi.....	1.31	2.35	1.01	1.90
Bacolod.....	1.11	2.58	.91	1.93
Cotabato.....	1.01	2.30	.89	1.73
San Fernando.....	.88	1.97	.77	1.46
Average 1928.....	1.14	2.32	.92	1.79
Average 1927.....	1.14	2.30	.87	1.76

It can be noted from the above table that in certain places the cost of living compares favorably with that of the city of Manila.

In using these figures caution should be exercised in view of the fact that they are not the results of extensive surveys but merely estimates of the cost of living in certain localities by labor deputies of the bureau of labor. However, for practical purposes the figures are sufficiently enlightening.

FINANCIAL STATEMENT

The sum of ₱207,434.00 was available for the expenses of the bureau. Of this amount, ₱193,351.09 was expended during 1928 as against ₱173,217.20 for 1927, or an increase of ₱20,133.89. The increase is due to the liberal appropriation for the transportation of homeseekers in 1928 which was ₱60,000 as against ₱30,000 in 1927. The salary and expenses of the resident labor commissioner in Hawaii remained the same as in the previous year.

The receipts of the bureau for license fees, service income, and miscellaneous sources were ₱12,159.49 as against ₱12,112.83 for 1927, or an increase of ₱46.66.

BUREAU OF COAST AND GEODETIC SURVEY

PERSONNEL

The present director, Commander L. O. Colbert, assumed office July 7, 1928, relieving Commander R. B. Derickson, who had been ordered to return to the United States. The usual transfer of officers between the United States and the Philippines occurred during the year, but the strength of the force was maintained. Two chiefs of divisions in the Manila office were absent at different times on assignment to the United States, where they conferred with members of the staff at the Washington office and were advised of new methods and procedure in their specialized lines.

SURVEY SHIPS

During the year surveys were carried on by the parties from the survey ships in the Luzon Strait, north of Luzon, on the east coast of Luzon, in the vicinity of Baler Bay and Casiguran Sound, and in the Sulu Sea and Archipelago.

The "Pathfinder."—This vessel was, at the beginning of the year, engaged in the survey of Favorite Bank and the area west of Pilar Island. The survey, finished on March 13, closes a gap in the previously completed work in the Sulu Sea. On April 2 the ship proceeded to the north coast of Luzon Island and

took up the survey of Balintang Channel and adjacent waters. This survey of this area is usually made during the cessation of the northeast monsoon. Considerable delay, however, is always experienced on account of the frequent passage of typhoons close to this area and the distance between it and the nearest safe typhoon anchorage. In spite of the hazards encountered the work progressed satisfactorily. On August 1st, the vessel returned to Manila where the annual repair was made. On September 21 the *Pathfinder* sailed for the Gulf of Davao and at the close of the year was extending the survey northward from Sarangani Island. Considerable progress was made in the hydrographic work before the advent of the northeast monsoon which, on account of the exposed location of this coast, made the work difficult.

The "Fathomer."—This ship completed the last section of the main arc of the triangulation at the western end of the Sulu Archipelago and obtained soundings in Sibutu Passage between Tawi Tawi and Pearl Bank. The vessel returned to Manila March 10 for certain repairs before taking up work on the east coast of Luzon. In the latter work, the shore-line survey and offshore hydrography were extended northward from previously completed limits to the entrance to Casiguran Sound. This ship cooperated with the Army Air Corps in photographing from airplanes the east coast of Luzon northward of this point. The pictures received will help considerably in arranging for the future survey along this coast. The party made an investigation of a reported shoal in Lamón Bay, conducted a survey of a section off the south coast of Catanduanes Island, and made a special examination of Hamorauan Reef. Work on the east coast was put off on November 5 at the beginning of the northeast monsoon. The ship underwent annual overhaul at Engineer Island and was ready to proceed on field work at the close of the year.

The "Marinduque."—This ship continued work from the previous year west of Damai Island along the northwest side of Tawi Tawi and later extended this work to the eastward of that island to include the numerous small islands and shoals extending from Tagao to Cacatan Island. An investigation of Iguana Bank, Iloilo Strait, was also made.

Triangulation party.—Lieut. E. B. Roberts, with the assistance of surveyors from the bureau of lands, completed the triangulation of the main scheme through the central valley of northern Luzon. Connection was made between this work and the main scheme south of Lingayen Gulf.

Level party.—Under the direction of Lieut. G. D. Cowie a line of spirit levels was run from Paranaque on Manila Bay to Los Baños, Laguna. A tide gage was established and operated at Paranaque for the purpose of relating the datum plane at that place with the plane of the Manila tide station. In this manner datum was obtained upon the water levels in the lake.

COMPUTING DIVISION

During the year the triangulation, which was not carried up the central valley of Luzon to the north coast, was adjusted and the positions of stations established earlier on the islands north of Luzon were recomputed. Triangulation along the east coast of Samar was also adjusted. Triangulation Volume II containing the results of the triangulation network spread over Palawan, Panay, Negros, Cebu, Bohol, Leyte, southern Samar, Mindanao, and the Sulu Archipelago was received from the printer. The collection and publications of this material greatly facilitated the dissemination of information on this subject. Private and government engineers now have available, in convenient form, the geodetic locations and descriptions of numerous monuments to which other surveys can be referred and adjusted.

DRAFTING DIVISION

During the year four new charts were compiled and one new edition of charts was prepared from additional information and surveys. Considerable miscellaneous work was done in the matter of furnishing details of surveys to other government bureaus and commercial organizations interested in shipping products of the islands.

GEOGRAPHIC DIVISION

During the year the drawings for map No. 10, Mindoro were completed. A relief map was constructed at the expense of a large private commercial concern

This map will be exhibited at Barcelona exhibition and for that reason care was taken to show plainly and by notes the important physical characteristics and political subdivision of the archipelago. The first airway map of an aerial route between two points in the islands was compiled. The standard list of geographical names was kept corrected for changes published in the Official Gazette.

NAUTICAL DIVISION

During the year considerable information was furnished to mariners and shippers. The files of charts and publications were frequently made use of by the persons interested. This office has been frequently consulted about the safety, facilities, and desirable aids to navigation of many of the smaller and less frequented ports. It has also been able to assist in the promotion of both interisland and foreign commerce.

An extended distance table for the sea routes between various interisland ports was prepared for one government rate-making bureau. A list of the names of barrios under the various Provinces was also prepared for another bureau.

During the year 5,003 copies of charts and 496 copies of maps were printed. Copies of numerous original survey sheets were photographed for chart construction and for use of the maritime interests. Some work was done for other government bureaus which required the specialized knowledge of the personnel of this division.

FINANCIAL STATEMENT

The total expenses incurred in the operation of this bureau since the survey work began amounted to ₱15,130,507 of which sum the amount of ₱8,972,767 was paid by the Federal Government and ₱6,157,740 by the insular government.

The expenditures incurred by the bureau during the year 1928 were ₱637,365. Of this amount, the sum of ₱352,115 was paid by the United States Government and the sum of ₱258,250 was paid by the government of the Philippine Islands. The income of the bureau of coast and geodetic survey totaled ₱6,246.

BOARD OF ACCOUNTANCY

Mr. W. W. Larkin, president; Mr. D. T. Dikit, secretary-treasurer; Hon. Vicente Carmona, member; all as of December 31, 1928.

These examiners have been reappointed in succession, each for another term of three years.

Under section 12 of Act 3105, as amended, four persons were granted certificates of registration as certified public accountants, without examination. Seven foreigners were also granted certificates of registration as certified public accountants under Act 3387. Eight persons received certificates of registration as public accountants.

Mr. R. W. Peters, holder of C. P. A. certificate from the State board of accountancy of Massachusetts, United States of America, filed an application for registration as certified public accountant under section 11 of Act 3105, as amended, but the board, although satisfied of Mr. Peters's qualifications, has postponed action on his application in view of the fact that he has not yet fulfilled the requirements regarding legal residence in the Philippine Islands.

Of the 33 candidates who were admitted in the examination given by the board on December 19, 20, and 21, 1927, only five were successful and were granted certificates of registration as certified public accountants in 1928.

There were 43 candidates who were admitted in the examination given by the board on December 17, 18, and 19, 1928, of which number 21 were repeaters. The results of said examinations are not yet known.

The statement of income and expenditures for the year ended December 31, 1928, compared with the same period last year, follows:

	Dec. 31, 1928	Dec. 31, 1927
Expenditures:		
Operation expenses.—		
Salaries and wages.....	P4,800.00	P4,800.00
Salaries and wages (temporary).....	291.81	285.44
Traveling expenses of personnel.....	.40	2.80
Postal, telegraph, telephone, and cable service.....	6.92	29.60
Miscellaneous service.....	49.45	89.29
Consumption of supplies and materials.....	196.56	120.63
Printing and binding reports.....	50.00	50.00
Total.....	5,395.14	5,377.76
Outlays: Furniture and office equipment.....	150.00	916.14
Total expenditures.....	5,545.14	6,293.90
Income:		
Examination fees.....	1,200.00	1,280.00
Renunciation fees.....	1,380.00	15,790.00
Total income.....	2,580.00	17,070.00
Excess of expenditures over income.....	2,965.14	10,776.10

BOARD OF EXAMINERS FOR CIVIL ENGINEERS

Mr. Luis Francisco, chairman; Mr. Paul W. Mack, secretary-treasurer; Mr. Julian Vallarta, member; all as of December 31, 1928.

The year commenced with Messrs. Luis Francisco, Paul W. Mack, and Valeriano Segura serving on the board. On September 28, 1928, Mr. Julian Vallarta was appointed to succeed Mr. Segura, resigned.

In the examination given by the board on January 9, 1928, 8 out of 19 candidates successfully passed and were given certificates. Another examination was given by the board on July 9, 1928, in which 24 out of 32 candidates passed. Seven out of 22 applications for certificates without examination were approved. There were, therefore, 39 certificates issued by the board during the year.

There were collected the amounts of ₡1,530 and ₡400 for examination fees and issuance of certificates, respectively, making a total of ₡1,930. During the same period, the board spent ₡545.71.

BOARD OF EXAMINERS FOR MECHANICAL ENGINEERS

Mr. Clemente Hidalgo, chairman; Mr. Angel P. Fojas, secretary-treasurer; Mr. Francisco Ycasiano, member; all as of December 31, 1928.

At the beginning of the year the board was composed of Messrs. Francisco Ycasiano, Clemente Hidalgo, and Manuel I. Felizardo. Upon the resignation of Mr. Felizardo, Mr. Angel P. Fojas was appointed on February 21, 1928, to succeed him.

During the year under review, there were issued 9 certificates in all, 8 of which were granted to those who have qualified in the examination, and 1 to an applicant for a certificate without examination.

The board collected ₡300 for examination fees and ₡90 for issuance of certificates. The expenditures of the board amounted to ₡343.57 for per diems, labor, materials, and publications.

BOARD OF EXAMINERS FOR ELECTRICAL ENGINEERS

Mr. Irwin McNiece, chairman; Mr. Ciriaco Coronel, secretary-treasurer; Mr. B. W. Brooke, member; all as of December 31, 1928.

There was no change in the composition of the board during the year, the members having been reappointed to serve for another term.

Out of two applicants who took the examination given by the board, only one passed. Two of six applicants for certificates without examination were approved. Five certificates were issued during the year including one for a 1927 applicant and a reissue to replace a damaged certificate.

During the year 1928 the board received ₡60 for examination fees and ₡50 for issuance of certificates, or a total of ₡110; and spent ₡181.19 for per diems, materials, publications, stationery supplies, etc.

BOARD OF EXAMINERS FOR ARCHITECTS

Mr. A. Gabler-Gumbert, chairman; Mr. Cheri Mandelbaum, secretary-treasurer; Mr. Carlos A. Barretto, member; all as of December 31, 1928.

Under department order No. 68, Messrs. A. Gabler-Gumbert, Cheri Mandelbaum, and Carlos A. Barretto were reappointed for another term until June 29, 1929.

At the meeting held by the board on July 6, 1929, Messrs. A. Gabler-Gumbert and Cheri Mandelbaum were elected chairman and secretary-treasurer, respectively.

During the year the board collected ₱70 for examination fees and for one certificate of "architect"; and spent ₱469.21 for per diems, postage, stationery supplies, printing and binding, and publication for examinations.

The board held two examinations during the year in which one out of four candidates passed.

BOARD OF EXAMINERS FOR CHEMICAL ENGINEERS

Mr. Francisco D. Reyes, chairman; Mr. José Espinosa, secretary-treasurer; Mr. Rafael H. Aguilar, member; all as of December 31, 1928.

The board of examiners for the profession of chemical engineer was created by department order No. 61, dated August 26, 1927, in accordance with the provisions of act No. 2985, as amended. Its first meeting was held on September 10, 1928, the members being Messrs. Francisco D. Reyes, José C. Espinosa, and Rafael H. Aguilar, all of whom having been reappointed on September 2, 1928; Messrs. Francisco D. Reyes and José C. Espinosa were elected chairman and secretary-treasurer, respectively.

During the year under review, the board collected ₱90 for 3 applications for examination, and ₱20 for 2 certificates of registration, or a total of ₱110. The expenditures for per diems amounted to ₱420; for publication of examinations, ₱22.85; for furniture and equipment, ₱126.53, or a total of ₱569.38. Deducting this amount of expenditures of ₱569.38 from ₱633.33, which was allotted to the board from the appropriated funds of ₱3,800, there was a balance of ₱63.95 unexpended.

Two persons were granted certificates for the practice of chemical engineering in the Philippine Islands, while two certificates were canceled in accordance with an opinion of the attorney general.

BOARD OF EXAMINERS FOR MINING ENGINEERS

Mr. Leopoldo A. Faustino, chairman; Mr. A. D. Alvir, secretary-treasurer; and Mr. V. Elicaño, member; all as of December 31, 1928.

There was no change in the composition of this board during the year 1928, the members having been reappointed on April 19, 1928. Mr. Leopoldo A. Faustino has been elected chairman and Mr. A. D. Alvir, secretary-treasurer. Mr. V. Elicaño is the third member.

During the year the board issued 3 certificates to candidates who passed the examinations held on January 9 and 10, 1928, and 4 certificates to applicants without examination under the provisions of act 2985 and its amendments. The total income amounted to ₱160 for examination fees and issuance of certificates, and the expenditures totaled ₱591.49 for per diems, publications, and equipment.

Very respectfully,

FILEMON PEREZ,

Secretary of Commerce and Communications.

His excellency the GOVERNOR GENERAL,
Manila, P. I.

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